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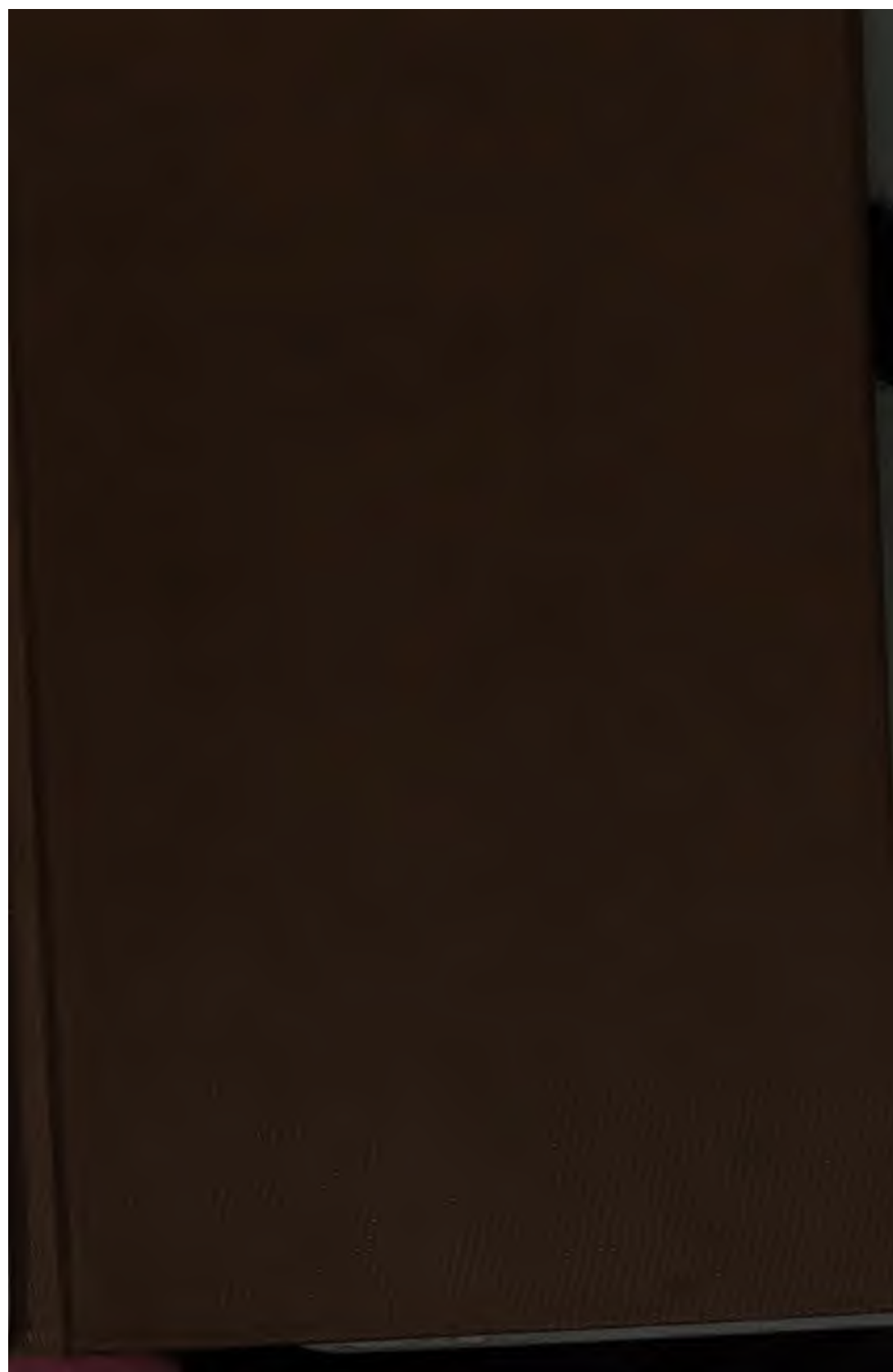
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FOR BOOKS RELATING TO
POLITICS AND FINE ARTS



THE
ORGANIZATION OF INDUSTRY,

EXPLAINED

IN A COURSE OF LECTURES,

DELIVERED

IN THE UNIVERSITY OF CAMBRIDGE

IN EASTER TERM 1844.

BY

Thomas
T. C. BANFIELD, Esq.

SECOND EDITION.

LONDON:

LONGMAN, BROWN, GREEN, AND LONGMANS.

1848.

~~38127~~
Econ 412.7

1874 April 28.
Request of
Hon. Charles Sumner
of Boston,
(26.26.1874.)

PRINTED BY RICHARD AND JOHN E. TAYLOR,
RED LION COURT, FLEET STREET.

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P R E F A C E.

THE chief desire of the author of the following Lectures was to call attention to the opinions recently promulgated by some continental Economists. This subject has grown upon him as he proceeded, and he has perhaps deduced more from the positions of those authors when combined, than they ventured to attach to them while they remained isolated. M. de Rossi's assertion, that value is essentially *subjective*, or conferred by the estimating party rather than an inherent quality in the object valued, causes a total revolution in economical science. It makes the wants, the tastes and the feelings of men the standard of value, whose exponent is then to be sought in the extent to which an object is consumed. This view demands of producers at least as much attention to the physical and mental improvement of their consuming fellow-citizens as to the mechanical operations by which production is promoted.

The second novel proposition to the English reader contained in these lectures, is M. Hermann's adoption of *the relations that grow up between man and man*, as a portion of the wealth and capital both of individuals and of nations. This is indeed a natural sequence of the former proposition, which it illustrates and completes. It recognizes the economical value of the family

and of the national ties. The finer feelings are not degraded to the level of sordid calculation by this assertion; but the science is raised out of the narrow sphere of material calculations, to the more elevated region of the prouder attributes of man. It is on this ground alone that the discrepancies which now render social life so difficult a problem can be reconciled. The author trusts that he has done no violence to this new and welcome idea, by applying it generally to the results of association. He has endeavoured to point out the true value of association, which has been so falsely appreciated by many ardent philanthropists. The aim of association is to obtain and secure individual liberty. Thus association stands in some measure in the same relation to freedom that capital does to income,—in that of cause to effect. Association is but a means wherewith to attain the end,—individual freedom of action and of enjoyment. Upon this argument the author rests his objection to Fourier's and Owen's doctrines, which recommend the sacrifice of individual freedom for the purpose of obtaining an effective association. This is indeed no other than the doctrine of conquerors and centralizers generally, who recognize no union save one of form. It is however needless to point to the whole course of history, as proving that the natural progress of society is one leading from what is oppressive in forms to independence on external distinctions; while at the same time a tendency to intellectual conformity is the more certain, in proportion as the pressure of outward restraint is the less felt. Hence the strong patriotic feeling in republics, and hence the ambitious feeling in all men to strive after equality, where all are equally at liberty to exert their abilities and to enjoy the fruits of their labour.

The classification of human wants, as the shape in which the element of necessity presents itself in economical science, is only new in the place here assigned to it, as is shown by the references to ancient writers. This classification presents us with the true ladder of industry, and throws light upon many important questions now in agitation. By establishing a limitation to the power of estimating conferred on man, it gives a positive direction to his activity, and thus affords a basis for scientific calculations in political economy.

A pleasing result of this classification is, that while, on the one side, it takes cognizance of the lowest wants of man, it is, on the other, unbounded in the height which it can reach, and fixes no limit to the aspirations of the human mind. The importance of this addition to the maxims of MM. de Rossi and Hermann will not be mistaken. The bold truths those writers have advanced are reconciled with the dependent position of man towards his Maker by a fixed classification of the slight burdens attaching to his existence.

The author will feel truly happy if he has in any way contributed to demonstrate the folly of imposing artificial restrictions, in addition to those inevitable restraints. Unlike the slight burdens pointed out as inherent in man's nature, and which are the source of pleasurable emotions when lightened, the artificial restrictions imposed by men upon their fellow-creatures are barren of joy as they are of utility. The amount of wealth (in the comprehensive sense of the word, which extends it to intellectual as well as physical enjoyment,) that man is destined by nature to command has never yet been fathomed in any age. But for the present our speculations are confined to the means most likely to lead us into a position, where we can safely allow our

thoughts to stray into the boundless vista of intellectual refinement, in anticipation of the time when our progress in it will alone be deemed worthy of attention.

The indifference towards the study of those principles which determine the correctness of political and mercantile calculations, was for a long time nearly equal in the two spheres of society most interested in them. The political world has, since the first edition of these lectures appeared, been driven to a recognition of the importance of correct economical views no less for parties than for states. It now remains for our traders and manufacturers to study the influences on which their markets depend, and until they do so trade cannot cease to be the lottery which it has long been for the great majority of the mercantile classes, many of whom have found good practical acquirements no sufficient substitute for faulty theories.

In order to avoid crowding these pages with examples and facts, the Author begs to refer to the small manual named the "Statistical Companion," in which he has put together the most striking illustrations of the principles developed in these lectures.

London, June 1, 1848.

INTRODUCTION.

THESE lectures were first put forward in expectation of the imminence of the movement on the continent of Europe which has recently filled all men's thoughts with economic calculations. A long residence in central Europe had given the author an opportunity of watching the progress of the errors which, although they did not originate with the professors of economic science, yet were too much favoured by many systems which were supported by learned authority. Nor have we in England escaped wholly unscathed.

In no modern system is the radical error of gross materialism so conspicuous as in that which Mr. Ricardo rather brought into notice than founded. Were this system defensible on any practical ground, the destiny of man would be grovellingly low ; since it would subject his reason to the accidental diversities of soils, and would chain his range of speculation to a sphere not much above that of the brute creation. The notion that because man is dependent for life upon his daily bread, he for that reason was abandoned by his Creator to irremediable dependence upon sites and soils, from which first stage it was easy to deduce as a second the dependence of all others upon the fortunate holders of such sites and soils ; is a doctrine worthy of that school which has declared itself incompetent to discriminate between the mind and the nerves by which the mental powers are called into activity. These lectures were held before the abolition of the corn-laws was accomplished, and it became a duty to expose as fully as possible the fallacious theory which had

been raised to justify the adoption of that unwise code. It is now, happily, needless to expatiate on the absurdity of making a growing scarcity a source of wealth, or of assuming that the exhaustion of supplies of food can form a basis of political power for a party or for a nation, although this theory has quite recently found a new defender. We are thus fortunately placed in a more advantageous position for encountering other fallacies not more gross and destructive in the main than those exploded views of rent, but which excite more alarm than the Ricardo theory, because they are supported by the sympathies of a numerous body of the population.

Another attempt to refute this dangerous theory has since been made by Mr. H. C. Carey, to which, however, I can as little consent as to the original error. For the Ricardo view of a *necessity** for progressing from good soils to bad, Mr. Carey's argument substitutes almost equally stringent grounds for proceeding with cultivation from bad soils to good ones. In both cases I humbly beg to protest that the main point of the argument is begged, which is the goodness or badness of different soils. In the lecture referred to I have shown that these qualities are not inherent in soils, but vary with our chemical knowledge, with the kind of crops which a nation requires, and finally, with the calculations made respecting the propriety of using the land for agriculture or for other purposes. This is no other than Adam Smith's view, to which the Ricardo theory has all along been opposed, and for preferring which, when the Ricardo theory was first preferred by Dr. Anderson, Smith has been seriously accused by his commentator M'Culloch. The doctrine of any such dependence on soils as Anderson, Ricardo and M'Culloch assume, could only be listened to when put forward with regard to the paramount value of a given crop, under stationary knowledge and with a cessation of trade. These three conditions were to a great extent realized when Mr. Ricardo wrote, that is to say, during the war, before chemistry had

* J. S. Mill.

disclosed that wheat had no special virtues that could not be found in other plants, and consequently while all calculations were made with regard to securing supplies of wheat. When these restrictions upon economical calculation are removed, the Ricardo theory, as applied to fertility of soils, is a pure absurdity.

But that portion of the theory which assumes a monopoly in the advantageous position of land arising out of the growth of population and civilization is of far more mischievous tendency than the former. To assert that land situated near a town, a canal, or a railroad, has a *monopoly* of any such situation, is clearly to deny that the choice of the site of the town, of the bed of the canal, of the line of the railroad, is the result of reasonable calculation, and that a different calculation can transfer the town, the canal, or the railroad, or the traffic of all three, to a different site. The advantages enjoyed by land arising from vicinity to a centre of civilization are clearly not inherent in the land thus benefited, but in the civilization which creates them. The absurdity of confounding things so essentially distinct is no less evident, than the danger of holding up the landowner as the monopolizer of advantages which he can only share in common with others that are benefited by them. It is not because Bedford or Belgrave squares are in Middlesex, but because London has grown so large as to take in those two squares that the property in them has acquired its present value. It would not have acquired that value if the Russells and the Grosvenors of old had not maintained the principles of civil and religious liberty, which have made London the capital of the world. But if any of their descendants should wish to test the fact of their possessing a monopoly, they have only to carry out some of the principles recommended by the latest advocate of this monopoly theory, and they will discover, like the citizens of Thebes, Memphis, Babylon, Rome, and so many other decayed capitals, how little aid even those who aspire after none but sensual enjoyments can derive from a materialist's theory of rent.

The inevitable tendency of reasoning on such a basis as I have

here exposed, is to establish those class-distinctions which the sound sense and good feeling of the country are desirous of obliterating, as belonging to an age of ignorance on the subject of social theories. The tendency of economical inquiries is to show that all citizens have equal advantages when progress is unimpeded, and that the wealth of one man is not taken out of the pocket of another. When all equally enjoy intellectual advantages there can be no superiority of occupations, and all who do their duty will be equals in the eye of society as before the law. It is then no less invidious than dangerous to hold up any men who happen to occupy a particular position at the moment as *a class* absorbing the gains of all others. Such an invidious pre-eminence has Mr. Mill endeavoured to give to the landlords, not recognising that this distinction fell with the corn laws*. I cannot call to mind any instance of land attaining high value in a country without progress in trade and manufactures.

The same leaven of materialism lies at the bottom of several innovations which have either been tried, or which are recommended as experiments that ought to be attempted. The same spirit prompted to fetter the principle of currency to the possession of metallic coins, which attempted to chain our power of procuring food to the nature of peculiar soils. Both attempts were alike derogatory to the dignity of human nature, for each denies the supremacy of mind over matter. The profits of trade and manufactures are analogous in their origin and in their nature to rent, the interest of money, and the fair gains of bankers or exchangers. All arise alike from a judicious use of the gifts of Providence, and all are sure to be largest where knowledge is

* "The result of this long investigation may be summed up as follows. The economical progress of a society constituted of landlords, capitalists and labourers tends to the progressive enrichment of the *landlord class*; while the cost of the labourer's subsistence tends on the whole to increase and profits to fall. Agricultural improvements are a counteracting force to these last effects; but the first, though a case is conceivable in which it would be temporarily checked, is ultimately in a high degree promoted by those improvements; and the increase of population tends to transfer all the benefits derived from agricultural improvement to the landlords alone."—*Principles, &c.* by J.S. Mill, vol. ii. p. 279.

most extended, property most secure, and individual liberty is most respected. No distinction can be admitted between the three, one of which is as sacred as the other. It is therefore as we have said a fortunate circumstance that the attempt to legislate for rents as a fixed quantity not dependent upon moral and intellectual qualities in man has been abandoned, and that the effort made to set up a new idol in the place of the former, to enslave peaceful exertion to the metallic standard, has in like manner proved a failure*. For we must not disguise to ourselves, that without this vantage-ground we could not successfully defend the third point which has been attacked in France. We could not expose the fallacy which has there been proclaimed, without revealing the unsound position occupied by those who assume to be the friends of order in this country. We could not declare the sanctity of the temple to be a general rule as long as any portion of it was legally violated by privileged dealers, and money-changers. For these reasons much stress is laid in the second lecture upon the dangerous character of the Ricardo fallacy, and I have also endeavoured in that lecture to point out the manner in which freedom of trade, by varying the field for the cultivator of the soil, at once secures him free agriculture, and impels him to make use of it to his own advantage.

It was also necessary to dwell upon mistaken encroachments on the earnings and property of manufacturers from the tendency of many fallacies current in England, but especially on account of the spirit which has long animated the continent of Europe. In the third lecture the diverging tendencies of wages and profits is pointed out, and the progressive increase in the *rate* of wages has been shown (where property is secure and intellectual progress is promoted), to be invariably accompanied by a corresponding decrease in the *rate* of profits. The manner in which this diminution is compensated to the capitalist is also

* I am justified in assuming the bullion theory of currency to be abandoned, since it was virtually declared to be untenable by the Chancellor of the Exchequer's letter of November last.

pointed out in that lecture, and the mutual interest which both labourer and capitalist have in the accumulation of savings is deduced from it. Were this accumulation limited, as the Ricardo school assumes, by the decreasing fertility of soils, the diverging tendency would lead to an internecine conflict, for our escape from which we are indebted to the sound sense of our manufacturers and labourers, who insisted upon freedom of agriculture and of trade. That so forcible an answer to the assumption that gain would result to the workman from an equal division of proceeds between the capitalist and his labourers, as is furnished by the diverging tendencies of wages and profits, should not have been immediately and generally adopted, may surprise those who forget the dependence of one economical principle on another, and that many favourite doctrines could not be deduced from these premises which were accordingly rejected. The mind accustomed to coarse generalities founded upon objects of sense is slow to enter upon the refinements which the contemplation of the play of the intellect renders familiar to the observer who takes a higher point of view. The labourer could not well be led into a field which those who undertook to direct him declined to enter. The most recent theory* put forward on the subject of wages in England involves a recognition of a confused partnership on terms of equality between two funds which are not only distinct, as not being coexistent, but of which one is constantly growing in proportion as the other diminishes. It lies in the very nature of wages that they must not only pre-exist, but absolutely be consumed before profits can be attained, and it is equally bad logic and political economy to mix up together things so essentially different. Were we to assume with Mr. Mill, that the additional value imparted to an object by work

* "Having treated of the labourer's share of the produce, we next proceed to the share of the capitalist; the profits of capital or stock; the gains of the person who advances the expenses of production—who from funds in his possession pays the wages of the labourers, or supports them during the work; who supplies the requisite building materials and tools or machinery; and to whom, *by the usual terms of the contract*, the produce belongs, to be disposed of at his pleasure."—*Principles, &c.* vol. i. page 477.

of hand or by machinery is a quantity on which all parties contributing to the improvement have an equal claim, irrespective of the nature of their contribution, it is manifest that this claim cannot be confined to any one process of manufacturing, but must extend over all. The picker and sorter of ore at the mouth of a mine ought then to be admitted directly to the profit and loss calculation of the engineer or watchmaker, and could claim an equal portion of the return which is created by the agency of the mind, of the capital, or of the connection of the refined tradesman. The third of these lectures aims at distinguishing not only the fields of activity which the complex world of industry embraces, but also the peculiar share falling to each individual labourer in those several fields. It shows that, while the voluntary association of all on the terms that respect the individual liberty of each, is what alone can produce any fund to remunerate labour of any kind, the attempt to encroach on the liberty of any party to such association infallibly diminishes the power of all, and consequently the result of their combined exertions. From this another rule is deduced, to the effect that while each contributor is an *indirect* participant in the gains of the other, every attempt at *direct* participation on the part of any in the gain of the rest is a violation of those rights of his neighbour, by respecting which all can alone be supported, or enriched. When the earnings of the wealthy are held up as booty to be divided at will, men who deem such proceedings justifiable seem to forget that the riches they would thus dispose of must be earned before they can be alienated. When the labouring man is encouraged to grasp at the profit of the capitalist, he is made to overlook the fact that his wages depend as much upon the security of the prospect of that profit, as the realization of that profit depends upon the cooperation of the labourer. A mere threatened attack on profits consequently suffices to destroy wages. But it should be added that while the labourer would be reduced to pauperism if the capitalist did not associate with him often for a single day, the man who has accumulated wealth has a large choice of labourers, and may

even (as he constantly does) choose the country in which he will employ his savings. Besides, the great fact seems altogether to be overlooked, that wages form a much larger proportion of the selling price of an article than profits, and that, could they even do so, it would not be wise in the mass of labourers to value their wages at no more than the capitalist's return. We have, again, dwelt in the same lecture upon the really efficacious means at the workman's disposal for bringing about an equality between his position and that of his employer. The most effective instrument for this purpose, after sound education, is the accumulation of capital, and its accumulations become proportionately more effective the more they are concentrated into large sums. That this assertion militates against the widely-spread notion that large capitals oppress the poor, the author well knows. He entreats, however, a patient study of the way in which he has developed and illustrated his principle in the third lecture. It will there be seen how Providence has supplied the means of equalizing all lots, but that the course to be pursued is not one that would endanger the social edifice in a rich country; it would, on the contrary, still add to its riches, and extend them until every citizen received his share. The gains of the trader proceed from a source similar to those on which the landowner and manufacturer rely for theirs. Like these, too, the trader's profits must be earned before they can be taken from him, and experience has abundantly shown that, when there is no prospect of his securely enjoying them, he will not earn them. This is indeed the cause of the poverty of a large portion of the globe, where rich soils, fine climates and native talent are of no avail; where the springs of industry are dried up by the absence of security. The labourer should take pains to satisfy himself of the truth of these assertions, which are fully explained in the third lecture. He would then stand as sentinel on the property accumulated, out of which wages are paid, to whomsoever it happened to belong, and would not allow himself to be seduced by the example of a neighbouring country, than which nothing could be more de-

structive to his interests*. It is true, at the Revolution of 1792, the land in France was alienated from its owners, and given in small portions to those who desired to occupy it; but neither then, nor at any time since, have the national earnings of France, notwithstanding the average goodness of the soil and climate, equalled the national earnings of England. The destruction of credit which ensued upon that violation of property made it necessary to feed millions of unemployed labourers on the spoils of foreign countries, or to get rid of them in the attempt. By rigidly enforcing these alternatives Buonaparte succeeded in establishing a power as ephemeral as was the occasion that gave it birth. We have heard much of the cheapness of bread in that country, but it is notorious that bread during the late famine was far cheaper in England. Meat, it is well known, is most scantily used, and the standard of comfort is, generally speaking, far lower than in England. Before taking such advice upon trust, I should strongly recommend our labourers to ascertain fully the condition of the labourers in France, and feel confident that every man who has seen the truth will, on his return to England, take up a constable's staff and repel with firm conviction all insidious attacks upon the wages' fund, through the capitalists' profits, however learned be the authority that recommends them. Having laid down the broad principle that earnings of all descriptions are sacred, because needful to the existence and progress of the human race, the author has unhesitatingly declared that no portion of society is justified in violating the share of any other. He is unable to find a law which shall enjoin favoritism to particular interests, and can see in all attempts at what is called protection, from whatever side they emanate, only a precedent for spoliation on all sides. The economist acknowledges but one law for the rich and for the poor; nor will his

* "For the purpose therefore of altering the habits of the labouring people there is need of a twofold action, directed simultaneously upon their intelligence and their poverty. An effective national education of the children of the labouring class is the first thing needful; and coincidently with this, a system of measures which shall (as the Revolution did in France) extinguish extreme poverty for one whole generation."—*J. S. Mill*, vol. i. page 448.

principles bear warping to screen rapacity on one hand, while on another they are used to enforce respect of property. Partial legislation would create rent, profit or revenue by limitations, which, by restricting trade, ultimately reduce wages. This and no other is the labourer's grievance. Landlords and Capitalists have no more right to encroach upon the field of labour, than the labourer has upon rents and profits.

Once more it is well that we have discarded the other fallacies before the last became urgently pressing.

Property is secured from spoliation by a twofold fence of motives. Without present security no durable efforts will or can be made to produce efficiently. Without prospective security no reproductive investment of capital can be expected. No class can raise a hand to violate profits, without destroying the substructure of wages on which these are raised, nor can any violation of the wages' fund be devised which will not at the same time justify the spoliation of the landlord and the capitalist. The tenth commandment is a sound economical precept.

The inviolability of real property can be maintained where liberty and knowledge reign, because we have historical evidence that the inducements to use it for the good of the community at large are stronger than the motives to misuse it. Under circumstances of open competition and sound legislation a man would as soon shut up a well-placed factory, or fill up the pit of a mine, as leave the land untilled. But the great public advantage which results from respect for property lies in its favouring the investment of accumulations of capital, so as to provide new and constantly-growing fields for the increasing population of a country. To huddle a whole population on the land is to offer an unnatural resistance to this law of progress.

If we closely study the greater part of the continent of Europe, we can trace to the prejudice in favour of certain modes of employment, which led to efforts to insure protection to particular branches of industry, the poverty with which so many fine lands are stricken. Of this France presents a striking example. The duties on colonial produce and a sliding-scale for grain are

deemed needful, in spite of the much-lauded distribution of the land, to protect the corn-grower; prohibitive duties on coal protect the forest owner. The trade of the country is carried on to the extent of two-thirds in foreign vessels; navigation-laws compel one-half of these foreign ships to come or go in ballast. The drawbacks on exported manufactured goods, which are rendered necessary by exaggerated import duties, amount to a manufacturer's profit on all the fabrics that France exports. The result of all this protection of special interests has been to diminish the labour-market, and so much to depress wages, that a revolution was inevitable, and even the character it would assume could be foretold. The legislators who defended such a system are moreover left without a single argument in the face of a labouring population, which, having long been plundered to minister to the supposed interests of their employers, now in their turn demand victims, regardless whether the sacrifice required will lead to a different or to a similar result. They cannot well stand eventually worse than they did when they revolted.

In England, on the other hand, we have an instance of the tendency of accumulated capital under the protection of law, of peace, and of scientific progress, to open new fields for labour, whether muscular or intellectual. New investments are sought where these guarantees of their security exist, but only where they exist; and the effect of these new investments is,—not to reduce the value of the *returns* from land and older investments, as Mr. Ricardo's theory sets forth,—but to diminish the *nominal capital* value of such when expressed in money. Had the sums which were originally invested in the funds all been laid out in the land-market, the price of land would have been forced up most unnaturally. The returns from land would not now be half what they are, and a far larger proportion of the population would be directly dependent upon soils, climates, and other territorial accidents, than is now the case. The detraction from rents which the interest of the national debt occasions is trifling as compared with the disturbance of profits which the investment of such an

accumulation of capital in the land-market would occasion, since it must never be forgotten that nothing would force it out of the natural course back into that market, but the insecurity of other investments. The capital thus made disposable by insecurity is sure to be wasted unprofitably, and it is in this manner that fields of exertion are daily closed in Ireland and in all continental countries, to the impoverishment and decay of the people. The same rule of course applies to all the items of that varied list of investments which happily enrich this country, whatever be their denominations. Railroads, mining, assurance, banking, navigation, gas, inclosure and other companies, no less than the smaller investments of individuals in factories, ships, mines, roads, dwelling-houses and shops, have all the same tendency, viz. to extend the field of labour, and consequently to raise the rate of wages. It is consequently from the disposition on the part of those who possess savings to invest them in new objects employing labour, instead of forcing up the capital worth of those which already exist, that the labourer must look for the augmentation of his wages. With the increase in the amount of capital so invested the *rate of profits* has a tendency to fall, but as the profit is calculated upon a growing mass of investments, it still well remunerates the capitalist. But it must be evident that were the labourer really the partner, taking equal shares in the result of each venture, he would also have to submit to a gradually diminishing remuneration instead of the increasing wages which he now receives, or would receive, if no obstruction were offered by acts of parliament, trade-unions, and political agitators, to the growth of the field of employment.

The labourer can promote the growth of this desirable fund for wages in two ways. The first and most necessary is by doing all in his power to promote the security of those investments and of the returns, upon a prospect of which alone money is usefully invested, instead of being wasted. The performance of this duty to himself and to others forms one of the causes of relative high wages which I have pointed out in my third lecture under the name of *trust*. Trustworthy associates are in-

valuable to the capitalist manufacturer, and the element of trust is what the labourer ought most to cultivate, now that machinery tends so rapidly to equalize skill.

The second mode brings a certain reward with it, as being the form in which labour is most productive, both for the labourer and the community at large. If the labourer by the substitution of machinery for handiwork adopts the manufacturing principle, and, working more efficaciously than he otherwise would, accepts a smaller *rate* of wages on an increased quantity of work turned out, the *amount* of his wages will assuredly be higher than if his labour were less productive. No person with a spinning-wheel could earn the wages of a factory spinner; nor could the best-appointed coaches have raised 8,500,000*l.*, as the railroad companies did last year in England. The number of hands employed on finished lines in 1846 was, according to the return of the Commissioners of Railways, 47,000. The capital expended was nearly 100,000,000*l.* Since all the people employed on the railways would have lost this chance of earning wages, unless the capitalist was induced to choose such a mode of investing savings, the value of tranquillity and social order which tempted to such investments must be apparent to all. It must also be clear, that although this new creation of property represents one hundred millions sterling, while peace and prosperity encourage traffic, yet that any circumstances discouraging to trade would cause it to lose its value, and might even render it absolutely worthless. To make the terms of the partnership which some propose equal, the labourer should share this risk. The possession of this property by the capitalist, so far from being oppressive or in any way injurious to the labourer, is the sole condition on which he can obtain wages. If the labourer wishes his wages raised, he ought therefore to desire a second set of railroads, and consequently should not endanger the property of capitalists in the first.

The confusion which has arisen about wages may thus be traced to the want of a due distinction between two classes of capitalists, the one of which is the enemy to extension of enter-

prise, and consequently endeavours (often unconsciously) to depress wages. Such are those capitalists who speculate upon a rise in the capital value of existing investments, instead of seeking to multiply returns. It is this tendency to job in investments that makes the narrow-minded amongst the landowners look with envy and dislike on the fundholder, or on the owner of any other profitable investment. The fundholder, on the other hand, is too often disposed to favour restrictions on manufactures and trades which divide the field with him; and that not on account of returns, so much as on account of the necessary abstraction of those sums which would otherwise have increased the capital, or nominal value of his property, but to the loss of the community and especially of the labourer. In my fifth lecture I point out the enormous sums which the accumulation of savings appears occasionally to add to the capital value of the funds, and how the bubble is sure to burst when it is sought to be realized, to the constant ruin of those who believed in the delusion.

With the jobber, therefore, whether in land, houses, the funds, shares, or corporation interests, the labourer has no community. His friend is the capitalist of the other order, the creator of new spheres of industry, who extends the field of labour. Where judgement is combined with enterprise in his investments, society is permanently benefited, and the extent to which they may be carried must be practically assumed to be indefinite. It is lamentable to look over the inhabited globe, and see how little has been done in this way in countries of the greatest resources. But this only confirms what I have said about the necessity of having a secure prospect of returns to induce beneficial investments. The beneficial investments which I have stated to be indefinite are those to which the labourer has to look for the gradual equalization of his position with that of the capitalist. Even now their relative positions are such, that capitalists are obliged to consult the tone of the labour-market before they commit their savings to the risk of an irrevocable association. Now it is clearly not being friendly to the labourer to counsel him to

add any difficulty to the natural one arising out of the constant increase of wages, which may deter those who earn from saving, and those who save from investing, so as to increase the demand for labour. Much has been ascribed to the effect of combinations and of strikes, which has simply resulted from the accumulation of savings in this industrious nation. It would be more correct to say, that of late the position of the labourer has improved in England and in Scotland, in spite of the exertions of the trade-unions to injure him. In Ireland, where combinations were at all times most violent and most effective, the labour-market has been destroyed.

There are outward signs by which the two classes of capitalists which I have distinguished may be recognized. The jobber is ever the advocate of some close *interest*, for whose supposed benefit he would sacrifice the rest of the community. He is a strong protectionist, which always means the friend of a clique, and not the friend of humanity. He would recommend raising the price of food even at the risk of restoring slavery, in his ardour to increase the profits of his particular friends. With him, as I have said, the labourer can have no sympathy.

The capitalist of the other class, on the contrary, has faith in knowledge and in exertion ; he does not fear plenty, nor seek to found a fortune on the starvation of his neighbours. He is friendly to extended business, which means a low rate of profits and a high rate of wages, and he studies rather the character and disposition of his associates than their height or muscular strength. He is not afraid of over-educating the people, of over-population, or of over-production. He laments, on the contrary, when he sees resources wasted or neglected, and people driven from want of occupation into scenes of intemperance and vice. Such a capitalist is the labourer's friend, and the country which owns the most of such will be the richest, and wages will there be highest. May England long continue to be the land where such capitalists most abound, and where labourers best understand and respect their value !

The inevitable result of false principles in political economy

is, that such induce insecurity of property. It is of common occurrence that insecurity is at first but partial and limited, but it never fails to become general if tolerated. All monopolies are considered fair marks for exaction, and the notion that particular classes enjoy advantages above others infallibly leads to class taxation. Acting upon this principle, and believing with Mr. Mill that the landowners enjoy certain undefined means of pocketing the rightful earnings of all the rest, a number of people in this country more numerous than influential, is very anxious to tax the land at a high rate. Some indeed would take it from its present owners and give it to the country to be held in trust. Unfortunately these doctrines, than which nothing could be more detrimental to industry and to civilisation, receive great support from the countenance given them by our statesmen in that part of the British dominions where we have retained the arrangements of the conquerors who preceded us. It is not possible to defend the present land-tax in British India without assuming it to be desirable to introduce it into other parts of the empire. Nor is it easy to find a more striking instance of the deplorable results of so false a principle as is there carried out, than is presented by India itself. The rapid change which would take place in that country on the abolition of this oppressive system, and the corresponding action on the interests of the mother country, through the stimulus given to trade, would, if they were allowed, furnish the best illustration of the error in supposing that any privilege is inherent in land which cannot be rivalled by the gains of any other kind of property where freedom is respected. We must not forget, that as masters of the Indian peninsula we are answerable for one-fifth of the population of the globe, which is too much to abstract from the general market to suit private whims or to minister to peculiar profits. Nor is much more wanted than a recognition of the grand principle laid down in my sixth lecture on taxation, that production ought to be free, and consumption only should be taxed, to enlarge all our markets and speedily lead to what is much wanted—a sound organization of industry.

ON THE ORGANIZATION OF INDUSTRY.

LECTURE I.

GENERAL PRINCIPLES.

1. IN availing myself of the liberal permission granted by your Vice-Chancellor, with the concurrence of the Professor of Political Economy in this University, to invite your attention to some subjects connected with that science, it cannot be my intention to offer a complete course of its principles. For acquiring a general knowledge of the principles of political economy, you command, gentlemen, sufficient means; and the attendance with which you have today honoured me shows that you do not need to have the importance of this study impressed upon you.

I propose on this occasion to confine myself to the consideration of some points which have a direct bearing on *production* and *consumption*, and in which I find it essential to modify or to dissent from views propounded by several English writers. Without establishing these points in a satisfactory manner, it is useless to attempt an analysis of the resources of producers or of the claims of consumers. Some principles that foreign authors have laid down seem to guide us nearer to the economical foundation of productive industry than our own authorities have done, and to the works of these writers I wish especially to direct your attention.

It is singular that the compound term *Political Economy* should be used to express the same idea which the Greeks indicated by the simpler expression *οἰκονομία*. In antiquity the whole activity of the citizen was absorbed in the idea of the State, from the interests of which the interest of no individual was regarded as distinct. Modern history records the introduction of

many considerations into the elements that constitute a State, which, in rendering the idea more complicated than it was for the ancients, admit a wider sphere for the activity of individuals. A citizen's moral as well as material relations to other States besides that which he inhabits are recognized*, and form no less an object of solicitude for modern statesmen than the relation in which the citizen stands to his own country. That this extension of individual exertion, and the consequent enlarged sphere of the economist, does not necessarily efface the influence of national distinctions, is in part proved by the substitution of the term political economy for the simpler expression of the Greeks.

The Greek νόμος most nearly translates the English word "rule." If οἰκονομία may be translated "house-rule," our term "political economy" denotes "the rule of the household of a State,"—a phrase that is used instead of "political economy" in Germany†. The term *rule* suggests the idea of something *ordered* with a view to *organization*. It is essential to bear in mind this interpretation of the word *rule* throughout all speculations of political economy, chiefly because in common discourse the synonymous term *economy* has acquired a different signification,—that of *saving* or *abstinence*. But, important as the saving or sparing of resources must prove to the economist, I need hardly add, that mere abstinence is but a part of the *rule* which, either in the household of a state or of an individual, is to lead to wealth, to dignity, or to power. In the course of these Lectures I shall use the terms *economy* and *to economize* in the sense of *rule* and *to rule*.

2. What the political economist aspires to, and what the laws of his science must teach, is to economize power.

The term power is used by the politician and by the mechanic in two different although analogous senses. The acceptance in which the political economist uses the word power, includes and combines both, inasfar as they contribute to the welfare of society. A highly successful and justly respected searcher after principles in another scientific field, M. Liebig, remarks:—"Civilization is the economy of power; science teaches the simplest means of obtaining the greatest result with the least exertion of power. Every useless exertion of power in agriculture or the other branches of industry, as in science and in politics, is

* See J. B. Say, *Cours Complet*, &c. Paris. 1840. I. 10. p. 134.

† *Staatshaushaltung—Staatswirtschaft*.

characteristic of barbarism, and marks a deficiency of civilization."

The faculty of calculating the economy of power is essentially an attribute of the human species. Were it not so, some of the animal creation would be able to compete successfully with man. Man's power is therefore intellectual in its nature. Man is unable to enter into bodily conflict with the greatest number of the other animals, while against the forces of nature at large he may be said to be physically powerless. It is the intellect of man which enables him to form combinations to withstand the forces of animals or of the elements. Each step forward in the exertion of this power lays a foundation for future progress*. Reason, therefore, the distinguishing attribute of man, is the source of human power, and since without knowledge man is unable usefully to exert the gift of reason, it is evident that knowledge is essential to economical power. The experience of this truth has given rise to the popular saying, "Knowledge is power."

3. But in the adaptation of animal, mechanical or chemical force to means for obtaining his ends, man exerts no godlike or creative power. The efforts of inventive genius that we most admire are nothing but discoveries within the pale of nature. The sail spread to the wind, the weight of water applied to a wheel, the pressure of steam upon a more complicated mechanism, the galvanic fluid set in motion, or the pressure of the atmospheric column upon a vacuum,—what are these but natural forces, adapted by man to his special purposes? Man could not have invented them, nor could he have organized their operation in the manner in which we see them in nature so beautifully harmonize, or so beneficially counteract each other's might.

The discovery of these agents, and of their proper use, constitutes but a part of economical knowledge. The knowledge that confers power is not alone the knowledge of books or of the traditions of crafts, not the skill of the practitioner of any art, or even the wisdom of the naturalist who lays open the mysteries of the animal or vegetable creations, or of any other single portion of the universe,—but that transcendent knowledge which comprehends all these, and goes beyond them,—the knowledge

* Mr. Senior founds the whole science of political economy on a moral propensity in man, in his first axiom: "Every man desires to obtain additional wealth with as little sacrifice as possible."—*Outline*, p. 139.

of man's place on earth as the favoured creature of Heaven, the deputed master of the globe that he inhabits*. In proportion to the skill with which man uses this knowledge, which enables him to work through the agency of secondary causes, he realizes the bold assertion, that he is made after the image of his Creator. The faculty of discerning the means wherewith to attain his ends is the source of his sovereignty upon earth. Endowed with this faculty, he is thrown naked into a world rife with animal, chemical and mechanical conflict: his portion is that which he subdues and appropriates from the vast fund of nature.

4. Every addition to human power is the result of a discovery either of some new agent, or of the combinations of which known agents are susceptible. It is therefore more correct to say that these forces are economized, than to suppose that they are produced, by discoverers and inventors. The process of advancement in the economy of power is that of analysing the field of nature, or of a simplification of the uses to which we put the agents already known. We can only save and turn to better account the means already at our disposal, or adapt to our use means that have hitherto been wasted or neglected. In short, improved processes rather remove obstructions to the use of any force than add to its intensity. Since the perfection of mechanical or chemical processes can extend no further than the overcoming of all the difficulties that impede the exertion of human power, and we are authorized to suppose that the mind of man is capable of devising means to overcome all physical obstructions, we must conclude that the exercise of human power, when raised to its highest pitch, must have a field of action that lies beyond the conflict with difficulties. We must then acknowledge that the true sphere in which human power ought to be exerted is in enjoyment. To imagine that there will be no tasks or duties for the employment of our power when the impediments to its exertion are overcome, is to estimate the position of man below that of the brute, whose necessities are provided for without other exertion on its part than of its instinct. Man's proper task and fitting duties cannot be limited to the contest with difficulties which he is destined to overcome; and these difficulties, which are, economically considered, mere impediments

* "Or c'est la connaissance de ces lois naturelles et constantes, sans lesquelles les sociétés humaines ne sauraient subsister, qui constitue cette nouvelle science que l'on a désignée par le nom d'Economie Politique."—*J. B. Say, Introd. i. 3.*

to his progress, can have no moral value. For the political economist, these difficulties present a field of contest on which he feels convinced that human intelligence must be victorious; whereas the store of wealth provided for man will remain to be enjoyed when all impediments to its appropriation are removed.

5. From the nature of human power must be concluded that it is not, like the power of brutes, confined to any particular organ of the body, or to any instrument natural or artificial. Neither the forehead, as in the bull, nor the shoulder, as in the horse, nor the digital members, as in the feline tribe, can be pointed out in man as the seat of his power. The attainment of skill in the exercise of any member of the body cannot therefore belong to the economical means of attaining any object. Neither is human power limited to any instrument or natural force. Neither land, nor water, nor steam, nor any chemical agent, can be regarded as the exclusive seat of power. Human reason has at its disposal all the forces of nature and all the combinations of art. Nor is this power inseparably bound to any of those social combinations to which man resorts under the pressure of necessity, or by which he seeks to gratify his aspiration after power. As long as the circumstances in which they originated continue, such combinations may be a means of power, but no such arrangements are invariable and at all times useful.

Man is not alone a powerful being,—he is above all a free agent. Upon the freedom which is given to him is based his responsibility, which is individual. He would not be free, if in every exertion of his power he was fettered to the use of some particular instrument or combination.

6. I have remarked that man is destined to attain his ends by the means of secondary agents. This is confirmed by the well-known distinction that prevails between the human species and the brute creation. No animal but man uses a tool to work with: consequently no action of any brute animal demands a reasonable calculation. With man, on the contrary, every act requires a calculation of the fitness of the means employed to the end sought; and the exertion of reason is indispensable in all he does.

We may conclude that the greater power is given to man, that he may command a greater number of objects for the gratification of his desires, and such as are of a different nature from

those sought by the other animals. As in nature all means are beautifully and exactly suited to their ends, we cannot but infer that the full exercise of human power, and the complete enjoyment of the benefits it can command, are indispensable to place man in his proper position. Any circumscription of this larger measure of advantages, any curtailment of the enjoyments they produce, must be painful and humiliating to man, and must limit his intellectual power.

The lowest state of physical degradation is that in which man is compelled to work as an unthinking instrument for his fellow-men. To this state men have invariably been reduced where slavery prevailed. Slavery has ever been based on a wrong estimate of human power. Had human power been acknowledged as intellectual in its nature, slavery would never have existed.

The lowest state of moral degradation which society attains is when man so little respects his fellow-man, and appreciates his aid so low, as wilfully to destroy him.

7. The most convincing proof that can be found of the impropriety of looking to man's bodily force as an instrument of power, is deduced from this fact, that his force is nearly useless without the aid of a tool or machine of some kind. The simple bodily force of a labourer is the worst requited of any that can be borrowed. A slave is a burden to a man who cannot supply him with a tool to work with. According to the utility of the instrument, of which a man understands the use, will the wages which he receives be high or low. The labour of the helmsman is better requited than that of the common sailor: the captain is more highly esteemed than either. It is difficult, in the present confused view of this subject that prevails, to trace the exact proportions in which labour is requited: the most economical use of power would, however, everywhere bring about a gradation of wages based upon this principle. That a man exerting mere muscular strength has a right to as high or a higher remuneration than one who exempts himself from bodily labour, cannot be asserted, because, bodily force being the weakest agent of human power, man has his reason bestowed upon him to enable him to use more efficacious means. In accordance with their ability to free themselves from bodily labour, will be the remuneration of men who employ intermediate agents in seeking their own ends or the furtherance of those of others. A simple economical calculation shows that where most is

produced, there must be the most to divide amongst the producers.

8. The *necessity* for employing involuntary manual labour is a result either of ignorance, which has prevented our devising mechanical processes to supersede it, or of indolence, which remained contented with its results. The latter was chiefly the case in antiquity, where the large proportion of slaves maintained in every state afforded the free citizens the advantages attending freedom from labour. The example of antiquity was stronger in the first ages of modern history than the precepts of Christianity, with which the practice of the Church of Rome did not accord. The contests of the Italian cities for freedom with the Popes and with other temporal powers, show the difficulties with which the aspiring mind had to contend in the middle ages. Before their reduction under the yoke of despotism, the Italians had just time to communicate the inventions which they had either brought direct from the East, or to which they obtained the clue in Asia to the cities of Germany and the Low Countries. The secure position of these corporations during a certain period allowed of the practical adoption of these inventions in industry, and they laid the foundation of that intellectual freedom which the succeeding age achieved. But only in the last and the present centuries have we attained confidence in treading the path that must lead to the full consciousness of our power, which is by the substitution of machinery for hand labour.

We have no reason to dread any want of occupation from the removal of those restraints on human freedom which now condemn men to drudgery. On the contrary, man's keenest spur to activity will be only felt when constraint ceases to paralyse his aspirations. The need of bodily exertion to preserve health, and the inducement to mental activity which the prospect of success holds out, will cause greater because cheerful and voluntary labour to be undertaken by men than they performed when under the bondage of ignorance. The example of the ancient Greeks and of the emancipated classes of all ages shows, that games, sports, chivalrous or warlike enterprise, ever succeeded where the necessity for labour ceased. There can be no reason why all the tasks that, under the pressure of necessity, bear an ignominious stamp, should not, when that pressure is removed, be considered attractive exercises of the mind or the body. Daily experience furnishes examples of this change. The

difference in the feeling with which an oar is handled by a galley slave and by a gentleman in a boat-race, is a type of the change to which we may look forward when machinery shall have removed the necessity for manual labour. The inspiring toil of enjoyment will only succeed to the dispiriting drudgery under the yoke of necessity that now prevails. Another contrast, by no means foreign to the range of economical speculation, is afforded by the labour which men under the influence of love freely undertake when compared with any forced drudgery.

9. The most rapid progress in economizing power is made by means of association.

The combined intellectual exertions of any number of men who freely unite to accomplish an end, exceed by far in power the exertions of the same number when isolated. The power we command is augmented in a rapid progression with constantly increasing ratio, in proportion to the numbers that unite to attain a common end. Upon the experience of this truth the social tendencies of man are based. Hence a sound system of economy is at the same time a good social system; but, in order to be effective, it must be freely chosen by those who adopt it. No economy or organization of power is acceptable to man which militates against his proudest attribute, his freedom of choice. The name Political Economy (§ 1.) is derived from the present most prominent species of associations in states or political combinations. A state cannot be otherwise defined than as an association into which men enter for the attainment of common ends. These ends may however be attained under different circumstances, according as knowledge provides various means for their attainment. Hence history presents us with a constant series of changes in the size and organization of states, which can generally be traced to the difference in the wants of men, and in the means of satisfying them, which increasing or diminishing knowledge brought about. Political divisions must therefore be regarded as arbitrary, or as dependent upon man's momentary necessities, and as such they offer no sound foundation for economical speculations*. The principles of political economy must be true in all states, whether

* "L'organisation artificielle des nations change avec les temps et avec les lieux. Les lois naturelles qui président à leur entretien et opèrent leur conservation sont les mêmes dans tous les pays et à toutes les époques."—*J. B. Say, Considérations Gén., i. p. 2.*

large or small, and must be best illustrated when all states combine to attain the common end, the welfare of mankind. There can therefore be no more an exclusive national system of political economy, than there can be a conventual or a communal system, as distinct from the general science. National exclusive distinctions may serve some momentary purposes, as conventual associations once did, and as it is conceivable that under certain circumstances of oppression communal exclusive associations might likewise be beneficial. These limitations of the natural law of association, which is based upon the increased power that men by associating command, are however each an evil, to which men only resort in order to escape from some greater evil.

The world now contains political associations of every possible size, varying from the few families that compose a horde of Afghans or Kurds, to the hundreds of millions of inhabitants that form the British and Chinese empires. The laws of political economy must be true in each, and for all of these associations, and can depend upon the size of none. The number of members united to economize power by association is therefore a means, and not an end, for the political economist. A natural tendency of man is to associate in large masses, because in such power is best economized. A disposition to separate, and to break up into smaller masses, is an irrefragable proof of some error in the guidance of the economical progress of a state which demands careful investigation. The size of an association is however only indifferent to the political economist when this circumstance offers no impediment to the multiplication of power by further association. The object of all associations of reasonable beings is to obtain, by united power, what each when isolated could not command. An association formed with a view to isolate its members from their countrymen, or from the rest of the world, involves an absurd economical contradiction. Such an association recognizes, on one side, the increase of power derived from association, but rejects the principle when it would prove most efficacious.

The leading characteristic of modern political associations is of an intellectual kind. It is formed by the languages spoken in different countries ; from the intellectual nature of human power, language, as the organ by which knowledge is communicated, cannot fail to assert prominent importance in economical experience.

10. If the necessity to associate for the purpose of augmenting

his power be deemed a limitation of man's freedom, his right to individuality in action is recognized in a second grand economical principle, *division of labour*. Both of these principles were known to antiquity*, and their importance has been of late years sufficiently recognized by modern authors. The attempts practically to act upon each, without sacrificing the one principle to the other, have been less successful, and the failure of these attempts has been the cause of much of the suffering that oppresses civilized communities. Where human power is recognized as being of intellectual nature, it will easily be conceived that association must be the result of agreement in views, and the consequent conviction of the utility of cooperative action. The greater the freedom of exertion that is secured to individuals thus associated, the more durable an association is likely to prove. All forms that constitute arbitrary distinctions are disturbing elements, and militate against the object of association, by controlling the free agency of the members. Instances of the possibility of reconciling these principles in the political world, are the establishment and recognition of fixed principles of international law by the states of Europe and of America. The German and Swiss Confederations, and the constitution of the United States, are national exemplifications on a smaller scale. But every village, and every commercial or charitable association, every factory, is in itself an illustration of this principle. Liberty of action must never militate against the chief purpose of the association, and can therefore not degenerate into negligence or anarchy without defeating the end of the union. A great safeguard against such degeneration lies in the division of labour, which, by allowing the members each to attain the highest possible skill in the management of his peculiar tool, adds to the profits of the association, and encourages the foundation of others. From this view of the necessity of leaving freedom of exertion to the members of an association, we can without difficulty conclude, that an association by which all mankind, as members, are bound to a common pursuit of an object beneficial to all, can alone be founded on the greatest conceivable freedom of action for each individual. Such an association, founded on the most liberal basis, religion has all along held up to man,—that is to say, that true religion which enjoins as a moral duty the co-operation of every individual in this fraternal spirit.

* Plato, *Resp.* ed. Bekker, c. 370.

11. Notwithstanding the high range of human power, there is an inseparable connection between the bodily and intellectual wants and enjoyments of man. The important economical result to be deduced from this is, the classification of our wants *. The lower wants man experiences in common with brutes. The cravings of hunger and thirst, the effects of heat and cold, of drought and damp, he feels with more acuteness than the rest of the animal world †. His sufferings are doubtless sharpened by the consciousness that he has no right to be subject to such inflictions. Experience however shows that privations of various kinds affect men differently in degree, according to the circumstances in which they are placed. For some men the privation of certain enjoyments is intolerable, whose loss is not even felt by others. Some again sacrifice all that others hold dear for the gratification of longings and aspirations that are incomprehensible to their neighbours. Upon this complex foundation of low wants and high aspirations the political economist has to build the theory of production and consumption.

An examination of the nature and intensity of man's wants shows that this connexion between them gives to political economy its scientific basis. The first proposition of the theory of consumption is, that *the satisfaction of every lower want in the scale creates a desire of a higher character*. If the higher desire existed previous to the satisfaction of the primary want, it becomes more intense when the latter is removed. The removal of a primary want commonly awakens the sense of more than one secondary privation: thus a full supply of ordinary food not only excites to delicacy in eating, but awakens attention to clothing. The highest grade in the scale of wants, that of pleasure derived from the beauties of nature or of art, is usually confined to men who are exempted from all the lower privations ‡. Thus the demand for, and the consumption of, objects of refined enjoyment has its lever in the facility with which the primary wants are satisfied. This therefore is the key to the true theory of value. Without relative values in the objects to the acquirement of which we direct our power, there would

* Plato, *Resp.* ed. Bekker, c. 559.

† Liebig declares the composition of the human body, as far as flesh and blood are concerned, to be organically identical with the bodies of the quadrupeds.—*Chemical Letters*, 19.

‡ This differs from Storch's distinction between "*besoins naturels et factices*."—*Cours*, i, 2. Both are founded in nature.

be no foundation for political economy as a science*. It is the constancy of a relative value in objects of desire, and the fixed order of succession in which this value arises, that makes the satisfaction of our wants a matter of scientific calculation, according to which we have to economize or to rule our power.

12. The acuteness with which the primary wants are felt by all classes offers the first and the largest market to the producer. The industrial occupations of every country include a far greater number of individuals devoted to the production of the rudest articles of food, clothing and dwelling†, than are occupied in producing articles of luxury or in intellectual pursuits. As the proportions existing between the persons employed in these respective occupations can only be changed with advantage by setting some free from the lower to be employed in the higher spheres of production, all economy in these proportions depends upon rendering the labour of those employed in the lower tasks more effective. This is the aim of all mechanical and chemical inventions. But in order to effect this aim, the mechanical process substituted for human labour must multiply the commodity used to satisfy the primary want, that, by cheapening this object, the higher wants to which the labour liberated is to be directed may find a market or fund of remuneration.

In this manner, the advance to the exercise of human power in its true sphere, that of voluntary exertion, is made dependent upon the satisfaction of the lower wants of man. The removal of every impediment that clogs our path to this elevated position is an object of natural solicitude, and forms the limit within which economical speculation in the present stage of civilization is confined.

Many nations, at different epochs of their history, have made great progress in the arts which tend to satisfy the primary

* The author who has approached the nearest to the economical law of value is J. B. Say, i. chap. 2. He had seized the phenomena which are the result of this law, but did not trace them to their cause, as is proved by the following passage :—" La valeur d'une chose est une quantité positive, mais elle ne l'est que pour un instant donné. Sa nature est d'être perpétuellement variable, de changer d'un lieu à l'autre, d'un temps à l'autre. Rien ne peut la fixer invariablement, parce qu'elle est fondée sur des besoins et des moyens de production qui varient à chaque minute. Cette variabilité complique les phénomènes de l'économie politique; elle les rend souvent fort difficiles à observer et à résoudre. Je ne saurais y porter remède; il n'est pas en notre pouvoir de changer la nature des choses." The reader must see that, after stating the phenomena, the detection of the law appears to present to the writer unconquerable difficulties.

† Mr. Senior adopts this succession.—*Outline*, 133. Plato puts *dwelling*, οἰκησις, before dress or clothing, ἡδύτης δ' ἐσθῆτος.—*Pol. ed. Bekker*.

wants. We may instance the Romans, of whose technical skill the Museo Borbonico at Naples furnishes such striking proof. The Phœnicians, Arabs, Venetians, and other Italian States in the middle ages, the Belgians at the same period, and the leading European states at the present day, have all in their turn attained to admirable skill in the mechanical arts, that varied according to the freedom allowed to intellectual exertion and the security afforded to the rights of citizens in each. But to the full enjoyment of human power, economized as it ought to be, none of these states attained, from the want of a clear insight into the economical connection subsisting between the two phases of national development. It has nowhere been clearly recognized, and consequently nowhere adopted as a practical rule, that the end of labour being enjoyment,—or, in other words, the end of obligatory labour being the attainment of free and voluntary labour,—*the more productive forced labour is made, the nearer a nation approaches the consummation of its wishes.*

The economist here borders on the sphere of the moralist, as in other parts of his theory he encroaches on the political field; because a sound system of political economy is unattainable without sound political and moral principles. The religion professed by a country, and the constitution by which it is governed, are primary conditions in estimating the progress it will make in economical development. The best religious tenets and the soundest political principles are requisite, as we learn from history, to admit of any considerable economical progress. Sound moral and political doctrines both favour, and are strengthened, by the development of the industry of a country, in strict proportion to that classification of the wants of the citizens that has been described. Hence we see that the range of human desires which passes the limit of physical wants, and includes moral advantages as well as objects of sense, does not lie beyond the sphere of the political economist.

13. The first step in the progress to wealth is the recognition of property; and the political economist can take no notice of what is not appropriated. Without the recognition of a moral principle—security of property—no accumulation of riches is practicable*. In their anxiety to obtain this grand foundation

* “Ce secours mutuel, ce travail commun trouvent leur récompense, partout où la justice préside aux rapports sociaux dans une rétribution proportionnel.”
—*Rossi*, l. 3.

of industrial progress, nations have submitted to almost every conceivable form of religious guidance and judicial government. Property has however its natural phases, that are developed with the growth of value*, and hence modes of society, that were well enough suited to the protection of one kind of property, have been found intolerable as soon as another species of property rose in value. The Christian command which enjoins equal respect of persons and of possessions for all men, includes all the phases of the growth of value, and is the most comprehensive economical law. But since laws only become effective in proportion as the consciousness awakens of the application of which they admit to cases in detail, men have constantly refused to acknowledge the application of the Christian command to growing modifications of property and of society in which they had no experience. Hence the conflicts which have at various times arisen respecting the due protection which property can claim. As long as the supply of food was a matter of difficulty, we have seen that the other wants of man offered no sure field of industry, and the claims of property which arose from the attempts to satisfy the higher wants were dreaded as dangerous or disregarded as unimportant. In the dark ages Europe presented the picture of whole nations enslaved to the production of their own food and that of their rulers and oppressors. Relief came from the exertions of a few enterprising communities who were obliged to seek protection from the aggressions of the Knights in the swamps of Venice and of Flanders, and in the rocky fastnesses of Amalfi and Genoa. The success of these traders awakened calculation and imitation. With the sea code of Amalfi commercial activity spread, and finally agricultural prosperity increased. The rise of manufactures took place under the ægis of municipal independence. With the fall of the great cities, manufactures were lost for countries that had long enjoyed them; but they were taken up in other lands, where the government recognized the right of the peaceable citizen to enjoy industrial liberty.

The attribute property is as little limited to land or to water, as it is to steam or to galvanic currents. No man can claim more than the use of what he has appropriated, and he can be protected in the use of the share that has fallen to him, be-

* Storch, i. 3.

cause he cannot employ it advantageously to himself without conferring benefit on all around him. But this is only true where the greatest freedom of thought and of action is allowed to all men. No man must have the privilege of repressing the growth of power amongst his fellow-men. No increase of that power can be otherwise than advantageous to him if he uses it properly. The right of thought and of action is however as sacred for the poorest citizen as for the greatest proprietor of accumulated wealth. When the labourer's rights are not respected, accumulated property is not secure.

While industry and interchange are unrestricted, there can be no fear of a *glut* in any stage of production. If the lower wants are not satisfied, their pressure offers the most remunerating field of exertion. The variety of remunerating occupations that present themselves where enterprise is unfettered, as the primary wants are successively satisfied, divide the exertions of producers and adapters, and prevent an accumulation of unnecessary power in any one branch of industry*.

When, on the other hand, this play of industry, that follows and suits itself to the natural and gradual growth of human wants, is impeded, either by legislative restrictions or by the fear of insecurity, the exertions of the industrious are prevented from embracing the greatest possible number of branches of industry, and a glut can easily occur in each or in all of the various stages. Again, if the supply of means for the satisfaction of the primary wants is suddenly checked, the producers of objects, whose value depends upon that supply, find their market taken from them, and a momentary glut may take place in those departments of industry. A glut arising from this last-named cause cannot however be of long duration, because the pressure of the primary wants draws the producers and adapters from higher branches to the supplying of the primary wants, by the improved remuneration which these offer when they grow urgent. Such a retrograde movement in the industry of a country infers, however,

* Mr. Senior's illustration of a glut taken from the book trade, besides wanting precision, inasmuch as the quality of the book is not specified, wants the connecting link by means of which the value of books must be shown to depend on the satisfaction of nearly every necessary want of man.—See *Outline*, &c. The Bible is a book that experience has shown to be most generally suited to the intellectual wants of all classes. Since the Bible Societies have suited its price to the power of purchasing that all ranks of society command, there has been no glut of Bibles.

a diminution of the national wealth, as well as of that of individuals.

The accordance of the interests of consumers and producers is proved by means of this classification of the wants, of the spheres of industry and of the property of individuals. Since the satisfaction of any lower want only awakens the desire to satisfy some want that was before neglected, and thus opens new fields of industry that divide the exertions of producers and adapters, it follows that *the greatest possible supply of any object of desire* is so far from being an evil, that it is *the only means of widening the field of industry and increasing the demand for labour*.

14. A limitation of the scope of the science of political economy to the study of the means of producing some particular kinds of riches, has been induced by neglect of the important fact, that all productions stand in a fixed economical relation to each other. The economical value of a thing is no more inherent in the object itself, than is the attribute of property which is the foundation of all wealth. Gold and silver are not wealth to the man who has no bread, nor does any man sacrifice the means of stilling hunger or of clothing himself, for pictures, Italian operas, or dancing. And yet no one will deny that the fine arts are elements of wealth, and that those who have it in their power do well to indulge their love for them*. The works of the artist, however, like those of the manufacturer and of the agriculturist, receive their value from the relative demand for and supply of each, which arise in a fixed order, as I have pointed out. The chain that may develop itself of our wants and power of supplying them is yet unmeasured ; because no nation has as yet reached the limit of the economy of power. Few have advanced so far as to banish suffering from the majority of the people.

We have therefore no scientific ground for stopping short at any stage of production, or of the enjoyment which it admits of. We have no right to limit our ideas of wealth to the conceptions of our own times, any more than any preceding age would have been right in so doing. The science of political economy has to deal with the relative value which one kind of production creates for all others, and in this calculation the solution of the

* "La valeur, encore une fois, est l'expression du rapport qui existe entre les besoins de l'homme et les choses."—*Rossi, Cours d'Économie Politique*, leçon iv.

most of the social problems that have been found difficult is contained. The value that one species of production receives from its relations to the rest, is based upon the gradations of the wants of man, and on these gradations, as I have said, the *science* of political economy is founded.

The necessities and even the desires of man that form the moving principle and ultimately the measure of value are subject to great and almost incalculable fluctuations. The change from a state of security to insecurity, from peace to war and the converse, the influence of education, under which the slavery to fashion must be comprised, all tend to fix the direction which the development of our wants takes when they pass the first stages of food and clothing. When aggression is threatened by an enemy, the means of defence obtain a preponderating value. When peace is established, the civil authorities, and all that aids the judicial power in maintaining order, take precedence of military preparations. Fashion brings objects into favour that sound sense would reject, or the influence of a popular orator causes whole nations to abandon habits that appeared to have grown inveterate. In all these changes it is evidently not any intrinsic qualities in the objects sought or refused, but the utility which the consumer expects to derive from them that gives to each its value. In a besieged town, diamonds are willingly exchanged for bread, which at other times would be sought with the sacrifice of enormous quantities of corn*.

15. This origin of value, according to which it does not depend so much upon the nature of the object to which it attaches, or upon any difficulty in obtaining it, as upon the supply of and demand for other objects, or the general economical condition of a community, does not admit of any distinction being established between *value in use* and *value in exchange*. When freedom of exertion and security of property exist in the full sense of the terms, value in use and value in exchange coincide. Value being in all cases a subjective quality, must differ between individuals as between nations†. It is in all countries fixed by the

* Mr. Senior instances the change in value of hemp, that before the revolutionary war sold for 50*l.* per ton, during the war rose to 130*l.*, and fell after the peace to its old price.—*Outline*.

† “La valeur en échange existe parcequ’il y a valeur en usage; elle disparaît dès le moment où cesse toute valeur en usage.”—*Rossi*, leçon iv.

See the limited and conflicting definitions of value enumerated by Mr. Senior in the note to ‘Archbishop Whateley’s *Logic*,’ last edition.

economy of power that each has attained. Where this economy is far advanced, more is consumed of every article than in such as have not economized their power. As the production is greater in well-ruled countries than in others, there is more in such to exchange for the different objects of desire, and the value in exchange of each object is therefore greater.

The endeavours of political economists have therefore been uselessly directed to the establishment of a general standard of value by which to measure the fluctuations in the exchangeable value of objects at various times and in different places. The precious metals have as yet been found the most convenient standard for practical use, although, like every other product of industry, they are subject to the influences that give value to all objects. Corn was long supposed to be produced with equal cost in long periods of time, and, as remaining unvaried in its average worth, to offer a standard of value for long calculations. The experience of late years has not confirmed this supposition, which has at all times been contradicted by the discrepancies in the corn prices in the various countries of Europe. Labour has been suggested as a standard of value, but it was found too difficult to define. The various kinds of labour differ too much from each other to afford a point of comparison, independently of the tendency of economy of power to dispense with mere manual labour, unaccompanied by skill or trust, in every operation. The remuneration of labour is, moreover, like the price of corn and the precious metals, subject to vary with the supply and demand for the different products of industry in every country. Where power is economized, the production is great in proportion to the number of producers, and wages are higher than where means are wastefully or negligently applied. It is therefore evident that a different measure of value from those hitherto adopted must be sought. The only safe mode of estimating value must point out rather the nature of the wants felt by the body of consumers and the means available for supplying them, than any quality inherent either in the object valued or in the standard applied as a test. M. Rossi has given the key to this essential improvement in the remark that value is an essentially subjective quality. The value of an object is therefore in the estimation of the person and is not inherent in the object itself.

1. Value in exchange and value in use in fact coincide economically, and are both expressed by the price of an object, or by

the quantity of any given product for which it will exchange. Price nowhere measures any intrinsic value in an object, but only the value of that object for the class of consumers with whom it is in demand. An article that some individuals are willing to pay dear for, is often quite unsaleable amidst a different class of consumers*. Articles of indispensable necessity, like articles of luxury, are unsaleable when the supply exceeds the quantity required for consumption. The price however correctly indicates the relative value of each when a demand occurs, that is to say, the price of the total quantity consumed. When the price of necessities, as usually quoted in small weights and measures, declines, it is common to say that they have fallen in value: such a mode of expression is erroneous. Even measured in money they have usually risen in value on such occasions, and the sum paid for the quantity consumed is larger than the sum paid for what is consumed at a higher price. The political economist must frame his calculation for the consumption of the whole market; he cannot follow isolated speculations in trade, in which small quantities of any commodity may undoubtedly exchange for more of any other commodity when the price is high than when it is low. But as a rise in price, quoted in fractional quantities, may spring from two different causes, it is necessary to distinguish between the effects of both.

A rise in price resulting from a scarcity of supply never increases the sum spent on the diminished consumption of the commodity thus affected so as to equal the expenditure on the same object when the price is low, if trade be unrestricted. One reason of this is, that a rise in price brings the object affected to a level with other objects of equal utility, the cost of production of which prevents their being sold lower; these enter into competition at the advanced price, and check the rise: thus, when corn grows dear, sugar and other substitutes are resorted to, that are less sought when grain is cheap.

If prices rise in consequence of the general increased production and distribution of labour occasioned by an economy of power, then the rule is only true of the prices that follow the change thus produced. The consumption under the changed circumstances will still be greater when prices are low, and the total quantity consumed will exchange for more than the quantity consumed when prices are raised by a deficient supply. Where

* Rossi, *Cours*, leçon ix.

liberty of exertion is respected, prices cannot fall for a continuance so low as to destroy this rule, because the new wants awakened by the glut of one commodity would draw off the producers, and the price would rise to its legitimate level.

17. Where the market is not free, the price of an article, or what it will exchange for in any arbitrarily fixed commodity, affords no criterion by which to judge of the value of that article. In addition to the effects of restrictions of the right of purchase and sale, price is subject to modifications arising from the unequal diffusion of knowledge and the irregular progress made by different nations in the economy of power.

The subject of price has been nearly exhausted by Professor Hermann*. According to this author, the following are the influences to which price is subject :—

On the side of the buyer.

1st, The value in use of the object desired.

2ndly, The power of paying on the side of the purchaser.

3rdly, The cost of procuring the same object from any other market.

On the side of the seller.

1st, The cost of production.

2ndly, The power of selling at any other market.

3rdly, The value in use of the goods obtained in exchange.

Any one of these conditions on either side can, in turn, become the leading one, and can fix the price. If we analyse the relation in which these influencing causes stand to each other, we find two on each side that coincide and that are of an extrinsic character. These are the value in use of the two objects exchanged, and the influence of competition, or the power of buying and selling in any other market. With regard to the remaining influences it may be remarked, that the cost of production acts in a contrary direction upon the price to the ability of the purchaser to pay. Between the limits fixed by these two elements of price, the economical problem is contained, as there is a constant tendency on the part of buyers to lower prices to the limit of the cost of production, and on that of sellers to exact the most that the consumer can afford to pay†. A due economy of power tends in a double manner to reconcile these conflicting views; for, as improved processes of production on the one hand cheapen the

* Hermann, *Staatswirtschaftliche Untersuchungen*.

† See Storch, i., Introd. p. 90.

articles for the producer, the new spheres of industry that open with every want that is progressively better satisfied supply the consumer with increased funds for purchasing. Hence *the value of an object for a political economist is expressed by the product of its fractional price multiplied with the extent of the demand for it*. In the richest country the sum of these products is greatest.

Arbitrary interference for the purpose of keeping up prices necessarily diminishes the consumer's fund, and eventually destroys the producer by inducing him to neglect his proper study, that of reducing the cost of production. The producer is excited to this study by the facility the consumer enjoys of seeking a distant market. To curtail this power, which forms a right (§ 13.) that is as inviolable as the right of property, is to throw the whole economical edifice into confusion without a prospect of benefit to any class.

18. Individuals are induced to embark in new branches of industry by the greater rate of profit that these offer in comparison with old ones. The fund which provides the new profits is no other than what is saved to the consumer by the cheapening of old processes. In order that any new process may become of national importance, it must in its turn be improved; that is to say, must be made to produce gradually cheaper. By this means the producer in the new process not only profits by the original fund with which he started, but is aided by the economy that is daily effected in all the branches upon the good management of which his branch of production is dependent. From this rule it follows that an economy effected in the production of food improves the condition of every branch of both production and adaptation, as all are dependent upon supplies of food. A better economy introduced into any higher branch of industry re-acts upon the lower grades, by increasing the sum of profits and of capital at the disposal of the industrious generally. The common effect of improvements in the higher branches of industry is to raise the scale of remuneration in the primary grades of production, by abstracting hands from them.

Since this rule is tantamount to teaching the producer or adapter to look for greater profits in a reduced price, an intimate acquaintance with the market or field of consumption is necessary to give it weight. This rule is best illustrated by a calculation founded, on the great disproportion subsisting

between the number of consumers in the lower and in the higher regions of society.

19. Markets must be regarded by the producer as pyramids, the base of which is composed of the poorer classes whose material wants are as yet but moderately developed, and who have but few higher aspirations. In lands that have rich soils and fine climates, the number of citizens in a state to enjoy intellectual development is greater than in less-favoured countries, where food is more difficult to obtain and the necessity for abundant clothing is more urgent. Such countries therefore, if education taught the inhabitants the true use of these advantages, would soon obtain an ascendancy in political power over poorer lands, if the latter were to curtail the right of trade which keeps all upon an equality. The freedom of traffic being an inalienable right of man, it must be desirable for the producer to feel that the domestic market, which he cannot, without violating the dictates of religion and the tenets of justice, close against foreign competition, offers, with every successive improvement of his processes, a prospect of greater remuneration than before. In other words, it must be cheering to see that all producers are encouraged to seek to produce more and more cheaply by the prospect of the greater share of profits which low prices hold out, than can be realized with high prices.

We possess but from few states statistical data respecting the population of sufficient authenticity to describe the proportions of the various classes of the population; an approximate degree of accuracy will however serve to illustrate the principle here laid down; I have attempted a classification of the population of England from data furnished by the poor-law commission, in the report on the sanitary condition of the country.

The proportions subsisting between the classes in those districts in which the average age of mortality was noted, the agricultural and manufacturing districts being taken together, were the following:—

Nobility and gentry	1,181,000
Tradesmen, farmers, &c.	4,221,000
Labourers, paupers, &c.	9,567,000
Total population of England by enumeration	14,995,138

From a scale of this kind the effect of a rise or fall in price can be calculated. The commonest articles of necessity have

in England a market to the extent of the whole population, or of 14,969,600 individuals. Bread must be produced in sufficient quantity to satisfy the demand of this number; meat, cheese, eggs, butter and beer come into demand amongst the adults in proportion as corn or potatoes are abundant; sugar, tea and coffee, although more easily dispensed with, are extensively consumed by the labouring classes when wages are good.

The consumption of wine, silk, silver, table furniture, superfine cloth, and of many expensive articles of household use, may be presumed to have its lowest limit in the second class: this class united with that above it number 5,402,000 souls, and although proportionately more numerous in England than in any other country, is here not so much exaggerated in number as the highest class; yet, were a tradesman to calculate the difference which it would make to him if he could by a lower price secure the consumption of the last class instead of confining his sale to the second, he would find that it was in the proportion of 5 to 15. The difference between the extent of the consumption of the highest and the lowest class is as 1 to 15.

From such a survey of his market a tradesman may calculate, that if he sacrificed two-thirds of his rate of profit in order to secure the custom of the largest body of consumers, he would increase the amount of his gains fivefold in comparison with what the custom of the highest class alone would yield him. He would double his profits if he reduced the rate by two-thirds, which in the second class would yield him any given sum.

This calculation is often adopted in trade in isolated instances, although it has nowhere been consistently followed up as a general rule. Examples are familiar in the book trade, which have been eminently successful: the most remarkable is, perhaps, afforded by the sale of the Bible. Hence too an author's works become most accessible to the public, and yield the greatest profit to publishers, when the copyright expires, as the numerous editions of Shakspeare, Milton, Hume, Gibbon, and of the works of other popular writers prove.

An analogous style of reasoning clearly shows the inutility both of copyright privileges and of patents for inventions. Since the greatest profit is the result of the most extended sale, combined with the cheapest process of production, whoever avails himself of any excuse to raise the price of a commodity limits his market in a more rapid proportion than his rate of profit increases.

20. The chief cause of the obscurity which prevails in the explanations that have been given of the origin and growth of profits, arises from the want of a due distinction between the manner in which producers and adapters are affected by the rate of profit. A high *rate* of profit is an almost infallible index that the *amount* of profit which it admits of collecting is small. Since all gain is but the result of economy, either on the part of the producer or of the consumer, it follows that where most is saved the fund for expenditure will be greatest.

If however producers' gains are to increase in proportion as they lower their rate of profit, their numbers must not augment in proportion to the extent which their business, at the low prices, attains. The natural provision against an unnecessary accumulation of power in any branch of industry, lies, we have seen (§ 12), in the new fields that open as soon as prices and profits fall in the old ones. Where exertion is unrestricted and property secure, the play of industry will never fail to relieve each branch in its turn, and will thus admit of an extension of trade in a greater proportion than the rate of profit is reduced. The first effect of low prices, where industry is free, is to throw production into the hands of large establishments: hence the first operation of a cheapening of corn, by the abolition of the corn-laws in England, must be to increase, if not the size of corn-growing estates, at least the scale on which they are cultivated*. Wherever a great subdivision of landed property occurs, without a corresponding refinement of cultivation, we may conclude either that prices are kept unnaturally high by artificial means, or that industry is restricted, or finally that the property, to the production of which the superfluous hands would in a natural course of things be drafted off from the land, is insecure. The first of these causes operates in Ireland, the last in most of the continental states. Were it not for this power of extending industrial undertakings when prices fall, a community would derive no advantage from machinery and the simplification of processes; the double result of such improved processes tends rapidly to enrich a state. By cheapening the cost to the consumer, a fund is spared for the encouragement of new producers: hence the advantage for the producers themselves of competition, and of a reduction in the rate of profit as well as in the

* This would be the case only if corn continued to form the principal object of cultivation.

cost of production. The limit below which profits cannot fall is fixed by the profits that arise in new branches of industry when the rate falls in others; thus, the limit below which the profits on food cannot fall is fixed by the growth of profits on clothing and building, and every other art which becomes profitable in proportion as food grows cheap.

Many people, who have an undefined notion of the power a nation can apply to the increase of production in any single branch of industry, seem to forget that the number of producers can nowhere exceed the number of consumers*.

21. The growth of the fund which is to remunerate new industrial enterprises out of the economy effected in older branches of industry may be exemplified by an equation, which, at the same time, exhibits an analysis of the economical problem. Let A represent the natural advantages which knowledge has placed at the command of any community, and let the letters a , b , c , d express the cost of tillage, of adaptation, of carriage, and of distribution (including the profits on each to the undertakers), which are requisite to place these advantages commodiously at the disposal of the members of the community. B will then represent the amount of wealth in its adapted shape of which the community can dispose. With every successive economy of power in any branch of industry this fund increases as follows:—

$$A - (a + b + c + d) = B,$$

$$A - \left(\frac{a}{2} + b + c + d\right) = B + C,$$

$$A - \left(\frac{a}{2} + \frac{b}{2} + c + d\right) = B + C + D,$$

$$A - \left(\frac{a}{2} + \frac{b}{2} + \frac{c}{2} + d\right) = B + C + D + E + F.$$

The increase in the one term corresponds with the saving effected in the other term. Any increase of A , by means of extended knowledge, augments the general wealth still more rapidly; thus,

$$Ap - \left(\frac{a + b + c + d}{2}\right) = (B + C + D + E + F)p + \left(\frac{a + b + c + d}{2}\right)(p - 1).$$

* An ordinary water-mill near Paris grinds 36 hectolitres of corn daily. It would require 168 men to turn this quantity into flour by hand labour. Their wages would now amount to 300 francs, whereas the whole cost of the water-mill does not exceed 10 francs per diem. M. Say, in reply to the question, "What are the men thus freed from grinding to do?" answers that they must produce other objects. To the question, "Who is to purchase these other objects?" he replies, "Those who hold corn ground at a saving of 290 francs daily."

It will easily be understood that economy effected in any part of the equation usually has a more complex operation than is here represented. Improved means of carriage frequently cheapen food, fuel, and other necessities, and thus lower the cost of the other expenses. Inasfar as b may be a function of a , any change in a will necessarily affect the value of b , without any special economy taking place in b .

This equation shows us, moreover, that there are but two modes of economizing our wealth; one consists in discovering new materials in the fund that nature presents us with, the other is by improved combinations effected with what we have discovered.

The result of this statement of the economical problem is, that the supply afforded by Providence in nature, for the use of man, greatly exceeds what he has at any time enjoyed, the drawbacks to his enjoyment being occasioned by his ignorance and consequent weakness. The diminution of the force, or the total removal of all these impediments, if it were practicable, is the only mode of placing this fund at the unrestricted disposal of mankind.

22. We have here subtracted the cost of cultivation, of adaptation, and of distribution from the gross fund presented to us by nature, whence it appears that the arts which aid us in the performance of these different operations detract from the original wealth of man instead of adding to it. On this account a distinction has been sought between different branches of industry, and some have been called productive and others unproductive, according as writers have more closely observed the utility that springs directly from one or the other. All these intermediate arts represent equally the labour which man must exert in appropriating the gifts of nature, and this is the real price that he has to pay for them: to diminish this price he has reason given to him, and the legitimate exercise of his reason, until he shall have conquered these difficulties, is directed to their diminution. The gross fund, instead of declining in proportion as the necessity for labour is lessened, augments by the means of the increased intellectual power that is then directed to analysing the realms of nature and discovering new means of subsistence and enjoyment.

Inasfar therefore as we are ignorant of better modes of satisfying our wants than those which the state of the industrial arts

in every country affords to its inhabitants, the persons exercising those arts are all producers who contribute to preserve the gifts of nature, and to present them when and where the consumers most require them. In countries where the industrial arts are few and badly cultivated, the inhabitants have few means of subsistence, and few instruments of power; they consequently extract less from the general fund than those countries who command more means: this is one reason why economy of power (§ 1.) cannot be said to consist in mere saving or abstinence. The expenditure in these intermediate offices is in proportion to the state of knowledge in a community, and can only increase (where power is economized) at a rate that affords a proportionately greater increase of the national wealth. There is therefore nothing to regret in the loss of the means that were used in imperfect processes, as soon as improved processes render them useless. Restrictions imposed on trade or on industry, for the purpose of perpetuating imperfect processes and keeping inefficient means in use, would therefore be absurd, were they not unjust and criminal. The productiveness of every useful art is measured by its tendency to remove the difficulties felt in that particular art. When the cyclus of improvement in the arts is completed, we may expect that manual labour will be almost dispensed with in all offices of drudgery. The most productive labourer is he who, by extending the bounds of knowledge, multiplies the general fund at our disposal.

23. The economy of power which liberates men from one species of toil and opens a field of activity in some other direction, is usually effected by the substitution of a machine or instrument of some kind for the manual labour that is rendered superfluous. Men must therefore employ a portion of what they appropriate from the fund of nature and adapt to their wants, in the performances of offices that were previously performed by hand. The substitution of the plough for a spade requires iron to be gained and worked up in sufficient quantity to allow of the substitution of the new instrument for the old one, and that a sufficient quantity of food be raised to feed horses or oxen besides men. For the substitution of machine for animal power upon a railroad, not only was an increased quantity of metal required, but the number of scientific labourers whose united intellectual labour devised the improved processes of founding, which made

iron abundant, was indispensable. Hence the importance of saving or abstinence.

Wealth bestowed by nature or accumulated by abstinence, if it be employed in reproduction, is termed capital. The name, which is taken from the capitation tax of earlier times that was levied on personal property, indicates the origin of the common limitation of the term to that description of property. Hence indistinct notions prevail respecting the nature of capital, which some suppose to consist wholly in accumulations of objects of sense. Money, buildings, machinery, cattle, water, air, land, are all capital, in as far as they are used to produce objects of necessity or enjoyment. Knowledge is, however, a far more valuable acquisition than all. To these visible and tangible objects M. Hermann* adds all the advantages resulting from association. These are of two kinds; such as appertain to individuals from their isolated exertions, as for instance, the custom of an established shop, which often sells for more than the shop itself; or family connexions. The effort to establish factitious gradations in society has ever been based upon the economical value of the results of association.

The second species of capital gained by association differs only in degree from this. A nation, a province or a city commands many advantages beyond the sum of the capital that each subject or citizen possesses. Plato early pointed out the fact, that it was for the purpose of obtaining these advantages by uniting which man could not command when scattered that men associated to form states and cities. The institutions of religion, law and education are the most valuable portions of the national capital, where they contribute to this result. Knowledge is so valuable an element of national prosperity, because the use of capital is chiefly to substitute artificial for human labour, and the devising of good substitutes is more difficult than their employment when devised.

24. Land, water, air, and the various powers which nature places at the disposal of man, and which form part of the general capital, are not distinguished from the artificial capital which is the result of man's industry and abstinence in their subjection to the economical laws which give value to all. In order that an extensive tract of land shall obtain value, it must be brought

* Hermann's *Staatswirthschaftliche Untersuchungen*, p. 6.

into use, and this can only be effected by means of economy of power. While man is kept in that low stage of intellectual development in which food forms his only object of desire, all land that exceeds the extent requisite to produce food is comparatively valueless. With every extension of the scale of wants, artificial as well as natural, land, as capital, comes into demand, and new varieties of property arise. Where sufficient security of the rights of individuals favours the general progress, the advance in value of all kinds of capital will be simultaneous. Waterfalls and choice sites for the growth of the vine or of other delicate plants are sought when manufactures are founded, and augment the fund that a nation can spend in delicacies. There is no separation practicable between the owners of the natural portion of capital and those who possess the knowledge and the instruments requisite to turn the gifts of nature to the best account. The union of the two is what alone gives value to either, and this union can only be cordial when the right of each is secured.

It is by some considered a hardship that a rent must be paid for natural advantages which the owner did not create, and which he, perhaps, often has not purchased: this is of no consequence to the person paying rent, because what he hires is a temporary right of property, to have which respected he must recognise the right of property in the owner. No rent is paid for any natural capital until the gain that can be drawn from it covers both the rent and the usual rate of profit that can be obtained elsewhere.

But in this, as in every other description of property, the freedom of the individual seeking the use of natural capital must be inviolate. Every man has a right to choose his market, and since it may be presumed that, if unrestrained, each will choose that which is most profitable, he forwards by such a choice the general good. In this, as in every other case, the simple Christian precept is the wisest economical law.

The capital of the labourer is his labour; over this he has a right to dispose freely. In any union for industrial purposes the labourer is a partner, whose share of the profits is a matter of free contract. Where power is best economized, the labourer's share is greatest; but it is in all cases proportioned to the efficacy of the instrument which he knows how to wield. Intellectual only differs economically from manual labour in its superior efficacy.

Where the right of property is recognised in all the phases under which it presents itself, credit, a most important kind of capital, arises. Credit is, next to knowledge, the grand facilitator of association for the purpose of creating wealth. Credit has its grades like property, and in many countries is confined to a few privileged individuals. That country is the richest in which credit is enjoyed by the poorest class, that is to say, by the great bulk of the inhabitants.

25. Owing to the great number of the inhabitants of every country that forms the lowest stage of consumers, we have seen that from this class the greatest remuneration may be expected by producers. For the same reason, the mass of savings effected by that class may be expected to exceed that of the higher classes. There can however be no doubt about the greater economy of power, taken in the comprehensive sense in which I have used the term, that can be effected in this class than in any other. The right of property consisting in the free use of their labour, is therefore for the labouring classes and for a community in general, the grand lever of progress to wealth. All interference with this right, whether by parliamentary legislation or that of combinations and unions, is to be deplored as unjustifiable.

Without the aid of the labourer (whether intellectually or manually occupied), the property of the owner of land, water, cattle and other gifts of nature is valueless: hence the desire to concentrate on certain portions of land, the labour which can alone render it valuable in the first instance. Where circumstances favour the effectuating of this policy by unjust means, such as nearly every page of history shows us was the result of an erroneous estimate of human power, both the class that resorts to such, and the community at large, suffer by its adoption. Communities that adhere to the prescriptions of justice and humanity cannot fail therefore, within a short space, to acquire so much greater wealth and power than a state which admits of injustice towards any class of citizens, that this alone compels the rival state to abandon its impolitic course.

Political power, which is one test of good state economy, has, under the influence of these circumstances, found a supreme seat in almost every country of Europe and Asia successively. America might have had its turn if sound education and respect for the rights of individuals had been equally cultivated with the

industrial arts in that quarter of the globe, and if the influence of the free institutions of some of the American states had not been speedily recognised in the leading states of Europe.

26. The progress in the economy of power, in every country that does not wish to have its industrial edifice shaken and its social condition endangered, must be more rapid than the rate at which the population increases. Since a cheap supply of food is the condition of the prosperity of all other branches of industry, means must be devised by those whose wealth derives from the higher grades of production to keep the supply of food in a due proportion to the increasing consumption. Where power is duly economized, the development of the other branches of industry, such as improved means of carriage and mechanical inventions, reacts upon the production of food.

A more probable economical difficulty than threatens from a scarcity of food may arise from the rapid increase of knowledge and the corresponding demand for labour, which may cause it to grow scarce before machinery can relieve a sufficient number of hands from unprofitable processes. In this latter case the labourer would demand a great increase of wages, and in this shape the question that has been raised, as to the conflict of wages with profits, presents itself in the clearest manner.

If the reduction of the *rate* of profit necessarily reduced the *amount* of profits taken by a producer, the labourer could only obtain an increase of wages at the cost of his employer. We have seen how, by extending undertakings, profits may augment in amount while they fall in rate. The manufacturer who raises his workmen's wages fifty per cent. is no loser if he proportionately increases his sale. By paying higher wages he adds to the fund which is to purchase his wares. Had he reduced his price instead of raising wages, he would have made the fund already at the labourer's disposal go further than before. On the other hand, although a labourer when using an improved machine receives a higher salary than before, he really has reduced the price of labour by giving more efficient labour within the same space of time. Thus the labourer follows the principle that is prescribed for all producers: he reduces his *rate* of profit on his capital in order to increase its amount. There is no conflict between the interests of employers and their assistants in this respect, where industry is free. The rapidly opening spheres of industry, where power is duly economized, provide for all. The

success of the employer ensures the labourer a demand for his cooperation. The natural consequence of unimpeded improvement is ultimately to place both upon an equality.

The theory which maintains that wages can only rise when profits diminish, is true as regards the *rate* of profit only, which we have seen varies inversely in proportion to the *amount* of profits. But although this theory originated under circumstances of restricted industry, it was understood and is by some still thought to apply to profits generally. Where trade is restricted wages can only rise by a reduction in the rate of profit, which then is not compensated by increased traffic.

27. The necessity for the constant increase of the size of establishments to keep up a due proportion between wages and profits, proves that producers are equally interested in freedom of trade with consumers, whose indefeasible right it is to choose their market. From the gradual rise of wants that I have described, there must always be some, the circle of consumption for which embraces a limited class in different countries. A sufficient supply for these can often be furnished from one or two establishments. The greater part of the diamonds now used in Europe have, I believe, been cut by a few Jewish families residing in Holland. There is no advantage to be derived from prescribing a home market for these objects of limited demand. If they are produced at a dearer rate at home than they can be obtained abroad, the rise of some other demand which might be better suited to the country is prevented. Objects of necessity in the same manner constantly extend their range beyond the political boundaries that separate nations. Wine can only be obtained in Russia from the Rhine or from Bordeaux, on the condition of some country's taking hides, tallow, flax and grain from Russia. Were the Bordeaux wine-merchants to turn a portion of their grounds into pasture, and the Rhenish vineyards to be ploughed up to grow flax, the loss would be obvious, because under such circumstances the Russian could not obtain an article for which he was willing to pay more than its worth on the spot where it is produced, in produce of which he had a superfluity. Freedom of interchange is thus indispensable to a highly advanced stage of civilization. By its means both the best provision is secured for the supply of the primary wants, and it furnishes in some cases the only means of awakening and satisfying desires of the most elevated character. Freedom of

trade, therefore, supplies all the advantages that are promised by the communal and other systems professedly founded on co-operation, with others that these systems do not include. It has besides the invaluable advantage of suiting itself to every stage of wants, and of ensuring that degree of individual freedom which man regards as the highest of his prerogatives.

28. M. Hermann's distinction between fixed and circulating capital is clear and simple.

Fixed capital being only *used*, and not *consumed*, in producing an object, the interest of its value, with an allowance for wear and tear, are all that enter into the estimate of the cost of the object produced. According to their nature, tools of various kinds must be classed under these heads. If a hammer or a saw serve a carpenter in building several houses, they belong to his fixed capital. The nails that he purchases to consume in building form part of his circulating capital while in his possession. If wine be kept so long that the cask grows rotten, it becomes necessary to look upon it as part of the circulating capital of the wine-merchant. Such too are the casks that are exported with wine, the sacks that enclose wool, and all similar packages. The wages of labour are paid with circulating capital, and their whole amount enters into the cost of production.

The holder of fixed capital (especially of land and water) and the labourer, or he who looks only to the temporary hire of his manual or intellectual aid in producing, are clearly both benefited by every change that renders circulating capital—whether tools, machinery, coin, or other means of facilitating production—more effective than before.

This rule is more comprehensive than one given by M. Hermann, who admits of a certain gain to the owner of fixed from the increase of circulating capital, only when the former is of a nature that precludes its being increased. There is perhaps no point in political economy of more importance to clear up than this. The apprehension that any change in the nature of the fixed capital existing, or any extension it might admit of, would prove prejudicial to its owners, has been in all ages the greatest obstacle to improvement. M. Hermann instances water-mills, and supposes, that if they could be monopolized in a district where circulating capital increased, a higher rate of profit might be secured to the owners than prevailed in other trades. To this I object, for two reasons. Were the scarcity of mills to render

corn dear, the value of all other products would certainly fall; but this would occasion emigration, or at least prevent an accumulation of population, and lower the value of fixed capital. On the other hand, were an importation of cheap corn allowed, all other products of industry would come into such demand, that the waterfalls, instead of turning corn-mills, would undoubtedly be worth much more for other purposes. The disposition to consider man bound to *some particular use* of objects is another great obstacle to social progress. Everything is given to man for the best use he can put it to. In nearly every case it is less the power than the use which is made of it that determines the amount of prosperity we command. In every succeeding lecture the importance of this truth will be impressed upon us. Through every phase in the growth of property it will at once account for the numerous errors that have so strangely circumscribed the power and happiness of nations, and will point to the dangers which we have in future to avoid.

The tendency of circulating capital to merge into fixed capital is an infallible index of improvement. It corresponds with the substitution of houses for tents, of pastoral life for hunting and fishing, of crops raised in rotations that preserve the soil in vigour for nomadic cultivation. Above all, it corresponds with the grand element of civilization, the substitution of machinery for manual labour. This tendency must be hailed as the chief promoter of the happiness of man, for we shall see that all parties are gainers where it is encouraged. It will be acknowledged as at least a correctly logical conclusion, if value be imparted to commodities through the estimation of the consumer, that it is good policy both to increase the number of estimators and to elevate to the utmost the standard by which they judge. This personal and moral elevation is effected by setting men free from degrading toil, which is mainly effected through fixed capital.

Another distinction that has been remarked by M. Hermann is the circumstance that fixed capital is often useless for other than one purpose. Circulating capital, on the contrary, can be turned at pleasure from one branch of industry to another. This is, however, not true of land, which can be applied to almost any conceivable species of production by the aid of art. Machinery, in the present imperfect state of knowledge, is more liable to suffer by the fluctuations of trade. In estimating the value of machines, this inconvenience must be taken into account, and

perhaps it admits of a remedy. Buildings are generally more easily exempted from the operation of unfavourable conjunctures that change their destinations than machines.

It behoves every speculator with capital clearly to discern what use he is making of his investment,—that is to say, to ascertain whether he embarks it as fixed or as circulating capital,—when he builds, constructs machines, or purchases shares in any joint-stock undertaking. Mr. Babbage tells us that the rapid succession of improvements in machinery of late years has caused a calculation amongst manufacturers, according to which the value of a new process is not worth more on an average than three years' purchase. All the investments in objects of so short a tenure, whether buildings, machines, or other utensils, must be regarded as circulating capital, and their full value must be added to the cost of production estimated within that period. If the buildings and machinery can be adapted to any other purpose after the process for which they were destined has been superseded, they may be considered as fixed capital. In this case their wear and tear only is included in the cost of production. In such a case, too, the value of this investment will improve in consequence of the improvements or of the new process that has exploded the former one.

By a judicious calculation respecting the nature of the investment in which a speculator embarks his savings, both the public and the landlord are made to share his fortune. His price, where his tenure is precarious, must be high enough to cover the outlay for his investment; and to avoid overstraining the price, he can neither afford high rent nor wages, except under the condition of an extended sale, and a great efficiency of labour. The possession of this circulating capital is therefore not so desirable on its own account, as because it renders labour efficient, and at the same time augments the fund for the remuneration of all. Capital is a means, and not an end, and therefore no class either of producers or consumers can be interested in retaining imperfect processes, to the exclusion of better methods, or of the cheap produce which these bring forth.

LECTURE II.

RENT, AGRICULTURAL PROFITS, AND WAGES.

FROM the importance of food, as the source which gives value to all other productions, it is natural, Gentlemen, that agriculture should be the first art practised in every country. It is, however, quite unnatural that the production of food should be deemed the chief object of the agriculturist's care. Providence did not deliver man into the hands of food-growers without an appeal. And what more beautiful ordination could have been devised for our emancipation than that which makes every other product of the earth valuable only when food is accessible? Thus, from the first beginnings of society, when the earth produced spontaneously more than could be consumed, provision was there for the enjoyments of refined industry, even when intellectual enjoyments were lost sight of. So far from estimating the value of the earth, given to man to enjoy, by its reluctance to produce food, it is clear that from the earliest time the value of all land was exactly proportioned to the ease with which the means of sustenance were procured. Where food was cheap, every other product was a more profitable crop than food; when food rose in price, every other product lost value.

The original capital of every country, therefore, is the land, with its products, and all that attaches to it, such as water, air, and the other natural forces. These are given to man, not to be limitations to his enjoyments as an intellectual being, but to minister to him as such.

In the misconceptions that arose on this point, the misery of man originated. Either the earth is there to be used by man as his reason directs, and he is to dictate what it shall produce, or he is a slave to the quantity and quality of the land on which he lives, consequently no free agent, and, as some theorists have correctly inferred from such premises, is not morally responsible were this the case. The inhabitants of no country can, in an ignorant age, increase, excepting where nature has furnished them with a prolific soil and a genial climate. Hence, in rude

antiquity, power and wealth were monopolized by such favoured lands. Babylonia, Egypt, and the valleys of the Ganges still bear tokens of the ancient power and wealth that history or tradition records of the empires of which they were the seat. The countries adjacent to these became the seat of pastoral husbandry. But the dependence of this second step of the industrial ladder upon the primary grade is forcibly illustrated by the immigration of the pastoral Israelites into the corn-growing Egypt, after a succession of years of suffering from scarcity of corn.

Such dependence upon soil and climate is, however, only necessary when the knowledge of a population is limited. The first successful attempt to remedy the evil is recorded in the history of the Phœnicians. These, inhabiting cities perched like sea-birds' nests upon the shelving rocks of Syria—without territorial possessions surrounding them, and defended by forests from the attacks of their powerful neighbours—soon discovered that the acquisition of food was matter of calculation. They recognised the great truth, that, since no man can consume more than sufficient for his nourishment, it was possible to obtain this indispensable supply by the sacrifice of only a portion of the labour of a country. Rocky sites, in situations only favourable for commerce, were the positions chosen by the founders of Athens and Corinth. We know the dependence in which these states, at the acme of their power, stood for supplies of grain on the countries bordering on the Black Sea; yet we do not find the Greek writers complain of this dependence as a national calamity. The legislature of Athens favoured the importation of grain from all parts of the Levant and the Black Sea,—a measure which seems to have sufficed to ensure abundance. In the Peloponnesian war, the crops in the country round Athens were frequently destroyed. The Athenian statesmen seem only to have regarded their supremacy at sea and the state of the public treasury.

Nearly all the countries that I have mentioned as wielding powers derived from abundance of food, furnish the first examples of the increase of human power that results from association. The fertility of ancient India, Mesopotamia and Egypt, depended on a command of water. When the demand for produce grew urgent, it was found practicable to satisfy it by carrying the water of the rivers Ganges, Euphrates and Nile over the adjacent country. For this purpose either the inundations caused by

the periodical rains were used, or the river being dammed up at a high level, its water was led through canals, over commanding elevations, whence it ran over the lower country. Of this latter mode of irrigating, the Greek historian, Xenophon, gives us some description as it was practised between the Tigris and the Euphrates. The traveller Chardin has described it in Persia; the missionary Du Halde has given an account of the mode used in China. But whether, as in Egypt and India, the inundations were used, or, as in Mesopotamia, advantage was taken of a high level to feed irrigating canals, the economical use of water demanded the first proof of civilization in man—*association*. No selfish barrier, in the first case, must have opposed the equal flow of the beneficent flood. In the second, no egoistic neighbour can have impeded the drainage of a field artificially flooded. We require for a thoroughly economical system of either irrigation or drainage, a unity of purpose in the owners of land, which is unattainable until they are convinced that it in no way interferes with the exclusive property and dispositions of the lands of each. Thus the principle of association is strengthened by combining it with division of labour. In Persia, India and the Levant, at the present day, wherever irrigation is practised, agriculture flourishes. Abundant crops of rice, indigo, cotton, sugar, cocoa, and other tropical plants, are only attainable where water can be commanded as well as land, either in the east or in the west. But with this progress in knowledge, which thus increased the power of man, a new species of property arose: an accumulation of artificial capital was unavoidable in embankments, in flood-gates, sluices and drains. This improved state of agriculture demanded security for this additional property. Such an advance in agriculture was only practicable when government was organized in a stable manner, —when rulers acknowledged that they were there for the benefit of the ruled, and their subjects submitted to organization for the welfare of all. With the downfall of the ancient empires, whether from internal competition or foreign ascendancy, these works of necessity and art decayed. But the pride of every successful race of rulers was to renew them. Under Persian, Median, Greek, Roman, Mahomedan sway in the East, irrigation, when restored, testified to the sound foundation which the power of the ruling house had attained, and to the security of property for which the subjects acknowledged themselves indebted to it.

In modern history irrigation plays a very conspicuous part in agriculture, but under exactly similar circumstances. The first step the Saracens took when their rule was fixed in Sicily and southern Spain, was to adapt this art, which was familiar to them, to the spacious plains that lay at the foot of the mountains. The luxury of the courts of Grenada and Cordova is familiar to most of my hearers. Some have, perhaps, visited the magnificent ruins of the Alhambra and admired the splendour of the mosques, that now are used as Christian cathedrals. This magnificence owed its birth to the application of intelligence to the cheap production of food under the principle of association, combined with security of property. It was undoubtedly forwarded even amongst the Mahomedans by an economy of power, which made the classes whose fortunes exempted them from toil apply to the study of the sciences and the useful arts.

The downfall of the Moorish power was owing to a moral cause, which belongs also to political economy, but to another of its chapters.

In countries where no artificial impediments have been raised to obstruct the simple views of the people, the system of agriculture practised agrees, at the present day, with the results of the experience of ages. The food-producer raises as much as he can, and that in the cheapest manner. This allows the cultivators of all other crops the highest price for what they grow, and the food-grower, in the principle developed in my last lecture, is remunerated by a constantly extending market for his grain. The land is regarded as capital, and where it is very abundant is allowed to work with the smallest amount of expenditure, being re-invigorated by frequent fallows. When population increases, the production of grain is removed to a distance to make room for the gardens, dairies, and other crops that are more remunerating for small capitals, as demanding skill and personal attention. By these means a good organization is introduced into agriculture, and rents grow high upon land that is devoted to green and fibrous crops. Grain, upon the cheapness of which these crops depend for their value, is removed to parts where, from the want of population, land is to be had on easy terms.

Rent being a share of the profits of cultivation, which the farmer is willing to give for the use of the land, the profits on

farming may reasonably be supposed to be high where high rents are paid. At all events, this will be admitted to be a practical test of the landowner's interest in good farming, and it is easy to show that this is consulted where the natural system that I have described is followed. Money-rents prevail, as a general rule, but in few parts of Europe. Belgium, Holland, and the north of Italy are countries where, as in England, they are common.

The climate of Belgium is too moist to demand irrigation for more than its meadows; and as products connected with manufacturing processes pay better than meadowing, excepting in certain districts, there is little irrigation on a large scale demanding association. Every advantage is taken of the relative value created for all objects by the abundance of others. Thus, while wheat is imported at a moderate duty (although too high) from the Baltic and the Black Seas, a large tract of land between Ghent and Bruges and Ostend is devoted to growing butter. Cheese of superior quality is made in the highlands of Limburg, which are too distant from the coast to be able to export butter. The hills of Limburg, on which no corn whatever is grown, and where the climate is ruder than on our exposed uplands, yield rents of 100 to 150 francs per bonnier of three acres, or £1 : 4s. to £2 per acre.

In Flanders, where a dense population has laboriously cultivated a large sandy tract, and made it remarkably productive, flax is the produce that pays best. The arable crops follow in rotations that prepare the land for flax. It is true the high price obtained for his flax by the Belgian depends most upon the treatment of the plant when grown; and this process is performed by intermediate hands, who purchase the crop standing on the ground. The rent paid in Flanders, however, shows that the landowner always participates in the improved intelligence and industry of the other classes of society. Two hundred francs per bonnier (£2 : 7s. per acre) is a common rent for this land, which, considering the enormous land-tax (£1 : 10s. per acre), and the cost of cultivation (estimated at £13 : 13s. per acre), is very high. Dung and hay are in these parts imported from Holland; and it must be obvious that the profit in flax and every other market crop, such as rape, linseed, cheese, butter and meat, must depend upon the cheapness of the two imported articles—hay for cattle, and corn for the inhabitants. The

Belgian farmer is, therefore, under no obligation to the minister who *taxes either*, under the pretext of protecting him. He has as little reason to laud the commercial policy which of late years has restricted the trade of Belgium; for this prevents the natural draft of hands from agriculture to other occupations, which freedom of trade causes—in other words, the organization of industry. The owners of vineyards and olive-groves in France are equally interested in the acquisition of cheap grain and cattle. It is a perversion of reason to insist upon their ploughing or meadowing to supply themselves with food.

The agriculture of Holland is no less admirable and profitable than that of Belgium. The country is so much lower in level than Belgium, that the whole land has to submit to one grand system of draining, with which, however, irrigation is at the same time extensively combined.

The province of Holland, situated between the rivers Maas, Leck, and Y, forms one combined system of drainage, the outlets to which are in the Maas and the canal near Catwyk, which communicates with the lake of Haarlaem, and is considered the true mouth of the Rhine. This outlet, through the downs that form the bulwark of Holland towards the ocean, is carefully defended by successive flood-gates and sluices, which are supported by water on the land side against the pressure of the high tide. When the tide is at ebb these flood-gates are opened, and the pent water, the drainage of the country at the back, issues out with a violent eruption that carries off any sand or stones that the tide may have left in the channel.

All the canals in the interior are leveled with regard to these outlets, and serve both for agricultural and commercial purposes. From the lands that lie below their level, the water is raised by windmills that turn screws or work pumps, and the quantities to be discharged and the time of working are fixed by a board (the *Waterstaat*), which is one of the most important departments of the government. Under such circumstances, it would be a real misfortune if landlords and farmers were convinced that profits and rent were only to be drawn from the cultivation of Cereales. Meadow produce, hay, butter, cheese, bleaching, and the more artistic branches of cultivation, fruit and flowers, are what the Dutch farmers and landlords look to. These modes of using the land yield the more profit the cheaper grain is in price. In consequence of the good selection of crops, and the

skill with which they are cultivated, agricultural rents equivalent to £2 and £3 per acre are current. These rents do not include such land as that near Haarlaem, which is totally unfit for the growth of wheat, but brings its owners perhaps the largest profits in the world as flower-beds. To the rent the high land-tax has here to be added.

In addition to the illustration of the principle of association thus afforded by Holland, a no less curious and interesting union of interests takes place between Holland and Belgium.

The rich lowlands of Holland that are occasionally inundated by the sea are known under the name of the Polders. Being saturated with salt, they yield not only fine grain-crops, but can be meadowed for many successive years without the use of manure. Holland is, however, in possession of abundance of manure, from the great stocks of cattle held everywhere, and the number and extent of the towns. The refuse of the towns has therefore become a matter of trade, and is regularly sold at high prices to Belgium. To this importation of manure from Holland, and to the care bestowed on utilizing the sweepings of their own towns, the Belgians owe the power of growing flax upon the light sandy soil of Flanders. The greater part of both East and West Flanders was originally not better land than the worst part of Norfolk, and much of it is sandy down land reclaimed and fertilized by cultivation and manure. At about twenty miles from Antwerp, up the Schelde, the reservoirs may be seen for the manure that is brought from Holland. The trade is managed by a company of capitalists, and the Dutch boats are so constructed that they are loaded by tilting from the carts in the towns, and discharge their cargoes without hand-labour. It is worth the while of every agricultural traveller to visit these depositaries, where the suggestions that have only recently been made by the Health of Towns' Commission for the benefit of English farmers have long been carried out practically by the Flemings.

The plan recommended by the Health of Towns' Commission will undoubtedly lead to a most desirable association in these islands. It will, I trust, heal the division now raging between town and country. The suggestion of the Commission is, that the systematic drainage of our towns should be carried in a fluid state into the fields, and then placed at the disposal of the farmers by irrigation. Under such a plan, it would be unquestion-

ably possible to double or treble the actual production of Great Britain. I am, therefore, in recommending the plan, doubly bound to show that increased production is no evil where intelligence and free exertion combine to utilise it. England is not without instances of judicious association for agricultural purposes. The extensive operations carried on in Lincolnshire and the Isle of Ely for the drainage of the fens, and known by the name of the Bedford Level, is one instance. But the principle has been far less adopted than is practicable, and we are more indebted now to that organization which secures growing property, and induces people to utilise it in trade and manufactures, than to the skill with which we employ our agricultural resources. The association between town and country which the Health of Towns' Commission has suggested will do the most where it is adopted to place us as far before the rest of the world in agriculture, as we undoubtedly are in the other branches of industry.

The agriculture of the north of Italy deserves even a more intimate study than that of Holland and Belgium. Like the farmer in these two industrious countries, the Italian prefers the culture of high-priced articles to ordinary crops, but he refines on the best northern husbandry.

Lombardy, situated at the foot of the Alps, and overlooked by the glaciers of that mountain chain, has, perhaps, the greatest fall of rain of any country in Europe. It was probably the inconvenience occasioned from the swelling of the streams that made the Milanese early turn their attention to the construction of canals. The "Naviglio Grande" was commenced in 1178, sixteen years after Frederick Barbarossa had destroyed the city, but only two years after the Milanese citizens had again defeated that intruder, and forced him to conclude an ignominious peace. The Naviglio Grande was destined to water the fields only, and was constructed for that purpose at a high level. The success of the experiment occasioned its repetition, and before the close of the fifteenth century the little state of Milan possessed five canals of considerable size, chiefly intended to assist the agriculture of the country.

The Saracens were, as I have said, the teachers of the art of irrigation, in modern times, in Spain, Sicily, and Southern Italy. In Lombardy, the monks were the first who practised the art. As early as the year 1138, a document still existing confers on

the monastery of Chiaravalle and Vicoboldone* the privilege of carrying water for the purpose of irrigation through any lands they pleased. To induce general consent to this expropriation, which, at a very early period, was found necessary, and with the aid of which all the grand improvements in that beautiful district situated between the Po and the Adda have been effected, a feeling of security was indispensable, and the division of labour was thus ensured. No landowner can now refuse another permission to carry a water-course through his land to another which is barren from drought. An understanding is therefore easily brought about, by which those proprietors who lie nearest to the canal or Alpine springs, that are now almost preferred, take the water in the first instance and sell it, when it runs off their fields, to the next neighbour, who, in his turn, disposes of what he has to spare to a third.

A systematic arrangement of this kind of course requires a methodical laying down of the land. The fields are, consequently, laid down, in Lombardy, in a scientific manner that no other country has to show. A class of agricultural engineers is found in Lombardy almost exclusively. The water, which doubles the production of the land, of course sells for as much as the land itself. Sometimes land and the water that irrigates it form investments for two capitalists, the landowner paying the water-owner a rent for the use of the water.

In this manner the wonderfully productive meadows that yield the Parmesan and Strachino cheeses, with the delicately flavoured Italian rice, are treated. On some meadows a constant flow of water is kept up through the winter, and suffices to allow the grass to grow under the mild frost of Italy. These winter meadows are called "Prati a Marcita," a title of unknown derivation.

Meadows of this kind can be mowed as often as nine times in the year. Berra†, the chief scientific authority on the subject of these irrigated meadows, estimates that eighteen to twenty acres will furnish fodder for fifty cows. It is owing to this abundant supply of green food, that upon a surface not much exceeding the extent of Wales, between 400,000 and 500,000 head of

* Ut monasterium possit ex Vectabia trahere lectum [*a canal*] ubi monasterium voluerit, et si fuerit opus liceat facere eidem monasterio fossata super terram ipsius, Johannis [*the seller's*], ab una parte viæ et ab alia, etc., et possit firmare et habere clusam in prato ipsius Johannis.

† Dei' Prati del Basso Milanese—1828.

horned cattle are found, besides a large proportion of sheep and horses*. M. Berra himself had cows in his stables that weighed eighty stone, while giving upwards of 2000 quarts of milk in the year. But the quantity of dairy produce is not more remarkable than the quality of the products which are prepared from it for exportation, and which bring the highest prices in all parts of Europe. Guicciardini, in an old description of the Netherlands, published by him at Antwerp in 1567, mentions Parmesan cheese as an article largely imported into the lower countries from Lombardy. How generally this delightful cheese is used in the whole of Italy is well known. In the kitchens of the rich it can now neither be missed at Paris nor at St. Petersburg. This article, which is thus universally prized, and which brings a higher price than the finest English cheese (which is little sought on the continent), is made from the skimmed milk, so that the farmer reaps the profit of his butter in addition to the cheese. According to M. Berra, 100lbs. of milk give, near Milan, of butter 2·38 lbs., and of cheese 6·17 lbs. Near Lodi, the yield is something greater. The high value of Italian farming produce is owing to the remarkable division of labour. It is rare to find the actual farmer or manager of the ground at the same time the cheese-maker. The "Casaro" is justly esteemed an important personage, and, even where he forms part of a large establishment, is quite independent of the other farming servants. A great deal of the cheese is made in Lombardy by wandering "Casari," who contract for the milk of a season often from more than one dairy, and make the cheese in an out-house on their own account.

Rice is extensively cultivated in Northern Italy. Instead of the flax of Belgium and Holland, the Italian produces another material for the loom, which is even of higher value. The dry lands that are not adapted to irrigation combine the culture of the mulberry-tree with that of the vine. The production of silk is again facilitated by a division of labour that is peculiar to Italy. The owner of the eggs, or, as they are termed, "the seed," appears at a farmer's residence, and contracts for his mulberry leaves as the "Casaro" does for his milk. He receives a shed, which is emptied for him, and remains six weeks—until his worms have attained their growth and spun. He then dis-

* The land-tax estimate was 407,895 in 1837.

appears with his crop of cocoons to seek the most skilful spinners, on whose work the value of what he has obtained very much depends. On the whole, it is scarcely possible to imagine a more pleasing instance of association, combined with division of labour in agriculture, than Northern Italy presents. The financial side of the picture is also a remarkable one.

A comparison between the rents specified as paid in Northern Italy and the rents of England, or even of Scotland, will show how much more the Italian landlord receives than the English landlords, although the price of wheat is not higher than 38s. 8d. per quarter, and wine is only rated at 6d. per gallon.

Northern Italy (like Holland and Belgium) is a country where land can be let to farm. The mode adopted generally is the *metayer* system. Thus one-half of the gross produce of the richest soil under the finest climate in Europe, and the produce of which is turned to the best account by the concentration of intelligence I have attempted to describe, is the landlord's share, if he find the stock. If the tenant find stock, the landlord draws but one-half of the nett return.

As an illustration of money rents, I may quote, from a good source, the rent of sixteen estates in the province of Vicenza, containing 10,027 jochs, or 1100 acres, amounting, in 1825, to 34,309*fl.* 41*k.*, being at the rate of 34*fl.* 2*k.* per joch, or £3 per acre*.

The market for produce being very limited in Germany, Austria and Russia, the whole endeavour of the farmer is in those countries directed, *not* to produce *the most he can*, but to obtain everything *at the least possible cost*. These are the countries, therefore, where grain ought to be grown, and large farms ought to prevail there. A mistaken view of the economical position of the farmer has led to a very minute division of the soil in these lands. The consequence is, that the peasant holders of ten to twenty acres, in order to obtain even the little money required to pay their taxes, are obliged to farm on a large scale, which they accomplish by association. The fields of a village are apportioned into three lots: those tilled for winter corn lie contiguous to each other, and are manured; the fields for summer corn lie also in one batch; and the third portion is left in

* See Burger's admirable account of the agriculture of Lombardy and Venice, where the rents of no less than thirty-three farms are specified, and which vary from £2 to £3 : 10s. per acre, exclusive of land-tax.

fallow. This is done that the fallow may afford a common pasture for the flocks and herds of the village, under the care of one herdsman. The principle of association is, however, not carried so far as to make them employ but as many hands and as many horses or oxen as would be requisite to till that land. The proprietary rights are still scrupulously insisted upon; and a man, with but a few acres, finds a motive for keeping two, or even four horses to till them in the bad state of the roads leading to or from the lands to the village. In Hungary, a plough may be seen to go out with eight oxen and two men, to till a few acres at a distance of some miles from the peasant's house. Hence the production of food demands an enormous sacrifice of labour. The market price is no index of value, and no accumulation of wealth takes place, notwithstanding the abundance of food. The benefits arising from society, which, in countries badly provided with means of communication, might soon be altogether lost, if not maintained at some sacrifice, are secured to the peasants by the system of living in villages, and are justly appreciated as the means of keeping the people civilized.

In the long evenings, the village ale-house serves the purpose of a club, where the men usually meet, and the newspaper circulates intelligence respecting the events of the day. In remote parts of Hungary, German papers may be found, besides the papers of the country and light periodicals, whose moderate price is suited to the resources of the villagers on the scale that I have described them. The price paid for these advantages is, however, a high one, as it takes the farmer off his land; and if close economical calculations were made, this would appear to cause him a serious loss. These small farms are experiments of division of labour uncombined with an efficient system of combination. Even where the peasants' farms are managed in the systematic manner I have described, the little gain that accrues to them at the end of the year is frequently annihilated by floods, hailstones, epidemics amongst the cattle, and other accidents. On such occasions, the government makes an abatement on the land-tax. Existence is thus supported by the aid of the females and children of a family, who invariably work with the men in the fields by day, and at night and in the winter spin the flax and wool for clothing. Of course, in a country where such a system prevails, there is no such thing as money-rent. This is the stage of society, and these are the

countries, where labour-rents prevail. The large landowners vary their productions by brewing and distilling, or making sugar from beet-root. Oil is made from poppies and rape, and fruit and tobacco are grown in the parts near the Rhine and in central Germany, where trade has improved agriculture. In these parts of Germany, as in Italy, an estate is occasionally, but rarely, let in partnership to a farmer, who is furnished with stock and seed, and who takes a share of the nett produce as the return for his labour. But these contracts are rare; and where money-rents are found, they are ridiculously low. I have heard of an estate of 100,000 acres let in Hungary, by the crown, to a large farmer, at the rent of one florin, or two shillings per acre.

In times when Englishmen were accustomed to allow some influence to the opinions current in other parts of Europe, there was no difference between our agricultural system and those followed by neighbouring lands that were on a par with us in point of intelligence. All bought where produce was cheap, and sold in the best market. France then imported wheat from Ireland in exchange for wines. Each producer suited his crops to the demand, and bought and sold in the best market he could hear of. Under these views, Dr. Smith gave his short but comprehensive definition of rent, as *the portion of the gains of the person employing the land which he finds it worth his while to pay for its use*. This definition makes the value of land depend on its cultivation. On the farmer's intelligence in arranging his crops, no less than increasing the efficiency of his labour, depends the profit that the land can yield. This definition, Gentlemen, the production of the last century, acknowledges that human power is intellectual. Had its author but had a glimpse of the mighty substitutes for his muscular power that man was on the point of commanding, we should not have owed to him the labour-test of value.

The instances I have adduced show that two calculations are necessary respecting the value of land. These calculations correspond to the principles laid down in the last lecture. The first consideration for the farmer is, not what the land is able to produce, but what the best market demands. The consumer gives the law, which the producer follows as well as he can. Having chosen the most profitable system of cropping, the farmer next directs his intelligence to the best mode of exe-

cuting it. In no part of central Europe are crops prescribed by legislative enactments, or bad systems supported against experience. These examples prove too that agricultural profits are everywhere in direct proportion to the intelligence displayed, to the security obtained, and to the competition experienced by farmers and landowners. But I must trace our fall from this simple and admirable view of agriculture. While it prevailed, we were on good commercial terms with our neighbours—our labouring population was considered the happiest in Europe. The deplorable change that came over this empire sprang from a theory that I must now explain. It is a remarkable instance of the dependence of those who call themselves practical men upon principles. After many years of war and an unusual isolation from the rest of Europe, the supply of corn expected to appear in our markets began to be calculated according to the quantity raised at home. The importance of the home crops was enhanced by the rapid increase of the population. It was found that foreign importations, impeded as they were by the circumstances of the war, were not able to affect prices seriously. The bad supplies that could be commanded in the two years of famine, 1816 and 1817, confirmed the notion that our supply of grain was limited, and could only be increased at great sacrifices. On these observations, a theory was reconstructed by Mr. Ricardo, which it seems had been put forward and was rejected during the life of Adam Smith.

Dr. Smith's theory, as we have seen, attributes to the land no inherent quality, by means of which rent can be obtained from its cultivator, beyond its general usefulness*. Mr. Ricardo deems rent only to be yielded by food.

The Ricardo theory of rent applies this principle in the following manner. It asserts that of five parcels of land, of varying qualities, rents will only rise on the best according as it becomes indispensable to cultivate the worst land for the production of the same crop. Thus, if

No. 1 yields 50 bushels per acre,	No. 2 yields 40 bushels per acre,	No. 3 yields 30 bushels per acre,	No. 4 yields 20 bushels per acre,	No. 5 yields 10 bushels per acre.
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* "Had land always yielded the same or a greater proportional return to every fresh outlay of capital and labour, the entire supply of food required by the most populous nation might, it is obvious, have been raised from ten acres,

This theory, applied as it has been to the growth of corn, declares that a farm of the quality of No. 1 will yield a rent of £500 only, when a farm of the same size, but of the quality of No. 5, yields £100 ;—that as soon as rent for wheat grown on No. 1 becomes £400, No. 5 will yield no rent, and the other numbers proportionately less. Now we know that no practical farmer restricts his cultivation to any one crop. Besides, to make this theory true, the cost of cultivation, even of wheat, must be the same upon all the soils, which is not the case. If this theory therefore, which we find must have been known to and rejected by Adam Smith, had not been practically rendered important in England by its adoption by the legislature, we might dismiss it here, as all foreign political economists have done. It will, however, be useful for us to look at it a little more closely.

Let us test the Ricardo theory in detail by my account of value. We may suppose five lots of land of various descriptions offered to farm. One shall be a rich loam, suited to the growth of wheat in all seasons ; a second shall be a heavy clay ; a third shall be a light sandy soil, like part of Norfolk ; a fourth may be fen land, like the Isle of Ely ; the fifth may be heath, like Bagshot Heath or Chat Moss.

The farmer who bids for lot No. 1, before he lays himself out to grow wheat, will, if he be wise, inquire the comparative value of flax and rapeseed, and other crops, the price of which is commonly high when wheat is cheap. The landlord would, from a skilful farmer, obtain a higher rent for these crops off the best land, if wheat could be cheaply grown elsewhere, than wheat itself could afford ; but he would only get this rent as long as wheat continued cheap. The farmer of the clay soil would probably give a rent equal to that of the first lot, if the cheapness and abundance of wheat allowed him to pasture profitably. Were he obliged to compete with the other in growing wheat, he would have to marl and under-drain the heavy land, and would not, of course, pay the same rent for it. Enormous sums are daily spent in fitting land to grow wheat, that is not by nature suited to produce such a crop. But these are only English calculations. In Germany and France, the clay soil would

or even from one acre, as easily as from millions. In such a state of things prices could not have risen and rent must have been wholly unknown."—*Mr. McCulloch's Note 3. to Adam Smith, p. 446.*

suit the vine. In Italy, the fen would be invaluable for rice or cheese. Even in England, it is paid high for as dairy land. The light sandy soil in the hands of a Fleming would produce the finest flax and artificial grasses. Bagshot Heath, under the hands of Dutch gardeners, would yield high rents, but only if the cheapness of wheat allowed people in England to spend a good deal of money in flowers. Now, what has become of the relative fertility of all these soils? Each is suited to some particular kind of cultivation—the value of the majority of which depends upon cheapness of food. All change their crop, whatever be their quality, with the growth of population and the spread of towns. The demand thus occasioned causes a continual transition from one series of crops to another. Each becomes in succession more remunerating the cheaper the preceding one is produced. The moment that we introduce the element of scarce and dear food into the calculation, we destroy the natural value of all soils; for even what are considered to be wheat soils yield most in flax or rapeseed crops when wheat is low in price. In this manner has it been possible for an erroneous economical calculation to unhinge the agriculture of these islands; to transplant to Holland a large portion of our dairy farming, to Russia and Belgium our flax crops, to America our tobacco and our apples; to expel the poultry from our farm-yards to France, that now supplies us with eggs and fowls, and to limit the enjoyments of our population by depriving them of fruit and flowers. The true diagram to illustrate the theory of rent would therefore show the rates of profit as follows:—

Grain, 10.	Raw materials for clothes, 20.	Dairy produce, 30.	Gardening, 40.
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The great responsibility incurred by the author and the teachers of the Ricardo theory of rent, the error of which has been exposed by Professor Jones, of Haileybury, arises from the evils to which every slight of the power of human reason inevitably leads*. The most imminent danger threatening a nation that adopts it is that of the slavery of the mass of the people. As food gradually advances in price, the value of all other commodities declines. Rapid improvements in manufacturing industry

* See 'Essay on the Distribution of Wealth.' Mr. Ricardo's theory of rent was never adopted by any foreign political economist. Say, Storch, Rossi, Hermann, Rau, adopt Adam Smith's theory.

may retard, but cannot preclude the ultimate catastrophe. The constant advance in the price of the great necessary of life, which is inevitable, were the Ricardo theory true, must in time absorb all the industry of the country to pay for food. I venture to appeal to our own experience during the last five years, and ask whether we have not in that interval had a foretaste of what this system leads to? This is the true key to the mystery of the distressed condition of the agricultural labourer. His master is doing bad business, and cannot afford high wages. It is not because the labourers do not combine that they are ill-paid.

To save what they could in the alarm caused by this theory, the English landowners resorted to the prevention of foreign competition. It is to this that we must ascribe the want of machinery, for an improved grain cultivation. There can be no doubt that if the wholesome pressure from which the other nations of Europe have not shrunk (at least, not to the extent that we have shunned it) could be applied to our farmers, they would long since have endeavoured to substitute mechanical for human muscular force. The agricultural labourer would then be raised in the social scale as the factory operative has been, while the saving occasioned by the change would have opened new fields for industrial enterprise. In England, indeed, it would probably have been found useful to leave the culture of grain, like that of sugar, to the colonies, or other tropical lands. The demand consequent upon the cheapening of corn would then soon have absorbed all the disposable land in these islands for the far more profitable cultivation of crops, that would then, and *only then*, remunerate better,

My wish is now not merely to expose the fallacy of the Ricardo theory of rent; I wish to assert that its reverse alone is true. But why is it that dear corn is a source of loss to all parties? It is because we can only gain by *economising*. What a man *saves* in his outlay for bread is what he has to *spend* in linen, in oil, in butter, in cheese, in meat, in cloth, and in beer, or in wine or sugar. Who are the consumers of all these objects at once? Of course, the rich. At the rich man's table you meet all articles of food. In his wardrobe you find cottons, woollens and silks piled up together. The poor man chooses between beer and tea for his meals, between meat and cheese, between cottons and woollens. Then what does the agriculturist evidently reject in England—what does he undervalue as a

source of profit when he builds his hopes of gain upon dearness of food? Does he not put this out of the power of the largest class of his fellow-citizens? The difference between the sum laid out in the purchase of 20,000,000 of quarters of wheat in 1839 and in 1834, amounted to £20,000,000 sterling. This was abstracted from other crops and from manufactures. Who can wonder that a general stagnation of trade took place? It is to the outlay of what the poor would save in the price of bread, if they got it cheap, that the agriculturist must look to pay for the flax, the rapeseed, the hemp, the hay, the butter, the cheese, the meat, the hides, and the wool, which he would *then* grow with more profit than grain. The cultivation of wheat, as too expensive and unprofitable, we might well leave to distant lands, for it would bring back far more remunerating crops, many of which are now banished from our islands. The farmer and the landlord are, therefore, the parties most interested in the rejection of our present corn-laws, which make wheat a profitable crop at the expense of every other. They ought to be clamorous for their repeal; for no one can deny that cheapness of corn will increase the demand for every other article of agricultural produce. The agricultural labourer ought to join in the cry, for these laws prevent the extension of the scale upon which grain is grown; they prevent a demand for those more costly articles which can be grown upon a small scale. The corn-laws thus deprive us of the only means of raising wages. We have seen continental landlords fare well by acting on this principle. Rent is the share of profits derived from the use of the land which the party hiring is willing to give to the owner of the soil. Rent, therefore, is measured as a general rule by the rate of profit obtained in all branches of industry in the same country. It fluctuates therefore according to the good or bad legislation, the state of knowledge, of morality,—in short, of all that influences the growth of wealth and of prosperity.

But rent, like farming profits, follows the law laid down, and both must often, where land abounds, be reduced in rate that they may be increased in amount. Hence in thinly peopled countries where soil and climate are favourable, crops of gross produce would be cheaply raised on a large scale with advantage both to the landlord and the farmer. For all other countries who can avail themselves of this aid, the prolific nature of a great portion of Europe and America ought to prove beneficial. There

are however peculiar limitations on the size of farms, even where land is of the least value. The time of men and cattle spent in going from the homestead to outlying fields is a loss to the cultivator, and where cattle are the only propelling force, the scale of farming operations is much more limited than where canals or other machines are available. Calculations have been made by good farmers in Germany of the loss sustained by the distance of fields from the homestead*. A similar calculation is the loss sustained by distance from the market for produce. But the force employed makes the greatest difference in these calculations, and grain is more easily brought from Odessa to London by sea, than it is transported in many parts of Germany thirty miles by land-carriage. It is on this account that all fixed rates, such as tithes, land-tax, county and poor-rates, and even turnpike-tolls, press so variously upon farms in different situations. The operation of these imposts has the greatest influence upon the rise and fall of rents.

I have alluded to the state of the laws in those parts of Europe that are most backward in agriculture, as having impeded progress. This applies to other legislative enactments than those which directly fetter exertion. Some attempts at improvement have been, perhaps, even more mischievous in their effects. The transition from one state of economical progress to another is easy, and need not be accompanied by the least inconvenience where property is secured, intelligence promoted, and exertion unrestricted. It was in some attempts to force a hasty improvement by means in which these indispensable requisites were lost sight of, that the German legislators of the last and the present centuries went astray.

The inevitable snare into which all theorists fall who ascribe inherent value to objects of use, and who deny the power of intellect to confer on them a higher value, is that of rendering property insecure. If the power of producing food lay in the earth, and not in the man who tills it, the problem of the proper distribution of property might be one of mathematical calculation; but if the production of food depends, as I say, upon the individual tastes, feelings, and wants of men, the only way to spur them to exertion is to secure to each the enjoyment of the share he gains in the manner he likes best: to enjoy the most, he has only to produce the most. What he does not want he

* See Von Thünen, *Der Isolirte Staat*.

exchanges for other objects, and in doing so his inclinations are, or ought to be, unfettered. Wheaten flour is precisely the same article, whether produced in Canada, in Buckinghamshire, or in Podolia. To all who buy in markets, it must be indifferent who grows the grain produced and where it was raised. We can, therefore, trace the rise of certain opinions unfavourable to the security of property and the exertion of individual industry solely to the interference of landowners with the liberty of others. It is, as I say, indifferent to a Liverpool merchant and a Manchester manufacturer where the raw produce is grown that he requires, provided he can get it everywhere on equal terms; but the attempt to prescribe a market to him to buy in is one which inevitably leads to retaliation. If he is obliged to purchase certain crops, nobody can deny his right to prescribe the mode of growing those crops. If wheat is not to be made more accessible than it has been for some time to our growing population, we may rest assured that the people will resort to modes of controlling the use of the land, in terms incompatible with security of property. It is to be lamented that philanthropic characters, like Robert Owen and Fourier, saw no way but this to meet the exigencies of the crisis. But it must be evident that no argument regarding the loss for all, that would ensue from the destruction of all other kinds of property, would be heeded, were a social revolution brought about by dearness of food. When food grows scarce, all things else lose their value, as we have seen. Their loss would therefore be little regretted, and all remonstrance in their favour would be powerless.

It is a singular piece of inconsistency in our times, that some, who set the highest value upon the free agency, and consequently upon the responsibility of man, support the notion that he is dependent upon particular qualities of soil for food*. Others, again, who wish to escape from the yoke of responsibility, would throw off all that appears to interfere with the most effective cultivation of the land, in order to remove the difficulty of procuring food. Were the latter successful in obtaining supplies of food on easy terms, they do not see that, from the moment it is provided, the responsibility of man commences.

Thus in Owen's and Fourier's systems, the more certain a body of men are of obtaining food and clothing by means of association, the more imminent is the temptation to gratify the

* Dr. Chalmers's Treatise on Political Economy is a curious instance of this conflict between necessity and responsibility.

longing after liberty. It seems to have escaped the notice of these theorists, that the scheme of dividing the land of a country amongst the bulk of the population has really been tried in several countries. I cannot, from my investigation, report favourably of the experiment.

The experiment was tried directly by open rapine in France, when the lands of the crown, of the church, and of the nobles were divided into lots and sold at low prices. In Germany the project of *fixity of tenure** was tried nearly half a century previous to the French revolution. In Prussia—whose overthrow in 1806 is in a great measure to be accounted for by the demoralization consequent upon the violation of property—matters were carried even farther than in Austria. The suit and service chargeable on the land, as well as the corn and money rents, were declared redeemable for a quantity of land that was to be ceded in lieu of them to the landlord. This last measure has only been partially carried into execution. A division of the soil amongst those who till it without profit, inverts the natural process by which hands ought to be constantly removing from the land into more profitable occupations, until the increase in the value of fibrous, green, and other crops recalls attention, and induces men to cultivate small holdings. This natural progress in cultivation has been checked in all those countries of Europe where security of property was shaken by the ill-judged legislation mentioned above. Hence the poverty of the small landowners both in France and in Germany, and the difficulty experienced in those countries of economizing labour so as to enable them to manufacture. The peasants were in fact, by receiving a gift of the soil, bribed to continue an unprofitable occupation.

I hope that my arguments showing that by consigning the growth of grain and gross articles of food to countries where they can be produced on a large scale, at low prices, is the way to ensure high remuneration for other crops, will lead to a careful consideration of the defects of our present agricultural system. Not only is the assumed natural disparity of soils no source of rent, but if it existed, the sterility of the poor soils would take away all value from the richer. The richer soils would then, as the Ricardo theory supposes, be condemned to grow food only; that is to say, the product which must always be sold cheap if

* This subject has been discussed in the article on Mr. Laing's "Notes of a Traveller," in the 'British and Foreign Review,' No. 32.

any other product is to have value. I hope I have succeeded in giving the farmer a practical rule by showing that the value of all his other crops increases in proportion to the cheapness of food. The landowner is still more deeply interested in this mode of estimating the value of land. For the landowner it is necessarily a matter of indifference from what use of the land he draws, provided he gets, the highest rent. This is clearly to be expected from building land. With the accumulation of population land comes into demand for building, and a due proportion is then also abstracted from what is farmed on a large scale, to be used for dairy farming and as gardens. That the increase of towns is mainly dependent on the cheap price of food, I need scarcely prove. Hence, all the landowner has to cultivate is the general advance to prosperity of the country at large. He cannot miss his share of the benefits derived from improvement when they do come. But in the present state of things in England, the landlords can do the most that is requisite to hasten its progress.

The first step to improvement will be to discard the prejudice that now vitiates all calculations, and assumes that food alone produces high rents*.

* To eke out the Ricardo theory, the monopoly theory was superadded. It is thus stated by Mr. McCulloch :—

“The two sources of rent above described, fertility and proximity to market, are totally distinct from those peculiarities of soil or situation which afford a rent on the principle of monopoly. Tokay, fine Hock, Chambertin, Constantia, or any particular kind of produce obtainable only from particular soils and in limited quantities, may, from deficiency of supply, fetch a price exceeding in any possible proportion the cost of production. The whole of this excess, after deducting the ordinary profit upon the capital, naturally goes to the landlord. Land occupied with dwelling-houses, gardens or parks, and possessing peculiar beauties of situation or disposition, is also of the nature of a monopolized article, and its rent is entirely governed by the demand. It cannot indeed yield less rent than if it were devoted to agriculture, but it may yield a vast deal more. When any situation affords greater facilities for business, as for example when a shop, by being in a fashionable part of the town, enables the occupier to obtain greater profits than could be made in a shop possessing no such peculiar advantage, this extra profit will be added to its rent. The reader will easily trace how much is analogous to rent, properly so called.”—*McCulloch's Notes to Adam Smith*, p. 447.

A calculation quoted in the ‘British and Foreign Review,’ No. XXXII., shows that in Belgium the land cultivated under the influence of town neighbourhood brings in a larger sum to the owners than the agricultural rental of the rest of the kingdom. It is not improbable that a similar calculation might be made for England. In these cases, which is legitimate and which monopoly rent? Besides, the so-called monopoly rents go on increasing with the prosperity of the country, and the agricultural rents decreasing. What becomes at last of the rule, and what of the exception?

We often hear the uncultivated land in England alluded to, sometimes with surprise, more frequently in terms of indignation. Why land should remain unused can only be explained by the fact of its being unsuited to the sole use that can now be made of it. Wheat is now the crop sought, and wheat cannot be profitably grown on Chat Moss or on Woking Common. To produce grain in these districts, years of sacrificed labour and large masses of capital would be required. But can nothing else be grown? Would a Fleming, a Dutchman, or an Italian be deterred from cultivating these tracts of land? We know they would not; nor would Englishmen have let them lie waste if the demand for the crops which they would produce were not limited by the high price of grain. The receipt I should give for getting our waste land into cultivation is, therefore, a different one from that sometimes proposed. I would not unsettle property by taking it away from the present owners in order to give it to some who might chance to use it better. I would rather see it made worth the while of the owners to cultivate it by creating a demand for all kinds of crops, which can only be done by cheapening the price of grain.

If the plan of encouraging competition, which will alone stimulate our domestic production, be not resorted to, the alternative is inevitable. With the growth of population the pressure of distress must go on increasing, until it overwhelms us all in common destruction.

It cannot be denied that our excellent trading and manufacturing organization have deferred the crisis which thus threatens. Other nations that do not enjoy these advantages are on a par with us in general prosperity. They would be before us if they had cultivated trade as we do.

But where there is no security of property and no due organization of labour, even abundance of food is of no advantage to a country. On the contrary, the desire for progress which exists everywhere, even when repressed, is fostered by a consciousness of the power to gratify it, and causes dangerous ferments that usually explode on any favourable occasion. In this position are the Russian and Austrian empires, and the southern states of Italy: this accounts for the present disturbed state of Spain and Portugal. Our Indian empire is perpetually on the brink of such a crisis, which, if not anticipated, may lead to fearful scenes in that quarter of the world.

The countries of Europe in which agriculture is backward are those where cities are few and far between. A town of 2000 inhabitants is considered remarkable in Germany. Belgium, Holland, the North of Italy, and England are, on the other hand, studded with cities, while the rural population is scattered over the face of the country, but not in such a manner as to be lost to society. Here, too, the rents in cities are high, and the ground about them in great demand. The agricultural rents near Milan are nearly as high as near Edinburgh and London. Building land sells at Brussels at £10,000 per acre. In the larger German towns it is rare to find any such value; and if a speculator in many parts were to build on a large scale, he would run the risk of finding his houses as little sought by the inhabitants, as the rivers, waterfalls and mines that abound and are turned to no account. Besides the want of a due insight into the value of the organization of labour, which would make all classes anxious to draft supernumerary hands off the land in order to employ them in other occupations, the state of the laws and of the public communications have hitherto prevented the development of the resources in the German and Slavonic states. The sovereigns withhold the political rights which the educated classes demand. The nobles, too, oppose all concessions to their fellow-subjects, not seeing, that with the manufacturer and trader a new species of property arises, which the citizen feels is not secure when he has no share in legislation. If the landowner understood his own interest, he would favour every new claim of property instead of opposing it; for when he does the utmost to render his land valuable, he is dependent eventually upon the co-operation of the citizen for success.

In matters of legislation, as in matters of business, the landowner who allows a proper share of influence to every new and enterprising class of industrious occupiers that comes forward to propose a new mode of using the land, will find his interests best consulted by so doing. As his rental can only gain by the increase of competition for the employment of the land, his moral ascendancy must increase if he devote the leisure thus left him to encouraging and aiding the new-comer, instead of thwarting his exertions.

LECTURE III.

MANUFACTURES—PROFITS—WAGES.

WE have seen that the manner in which the agriculturist fills his post at the opening of the industrial scale, fixes the number and proportionate importance of all other branches of industry. Food, as the primary want, must first be satisfied, whatever sacrifice it may cost. Until food is provided, no other want is urgent, nor were it ever so distressing, could it be regarded. But in proportion as food grows abundant, the other wants rise in importance, and a constantly expanding series of desires is awakened, which are, however, classified, as we have seen, according to their different grades of pressure. In the first instance, rude clothing and mean dwellings,—then delicacies for the palate, ornaments for the person, commodious, rapid, and elegant conveniences for travelling, succeed each other, as wants demanding satisfaction. The enjoyment derived from the gratification of cultivated feelings and tastes closes the list for rational beings.

If the moralist is struck with admiration at the contemplation of this beneficent dispensation of Providence, by which our wants may, in some measure, be said to be created by the means of satisfying them; the political economist prizes no less the united bounty and wisdom which thus opens to man the prospect of indefinite enjoyments, to which the sole condition annexed is, *that he shall appropriate them.*

The labour saved in agriculture by exertions of intelligence, whether directed to the improvement of processes, to moral progress, or to wise social combinations, is all that a community commands for manufacturing industry. Knowledge and exertion make this fund go farther in some countries than in others. It is most efficacious where security of property enables large bodies of men to abandon other modes of production altogether and to devote themselves to one task. This division of labour, far from militating against the principle of association, is im-

practicable unless the true association ensures an interchange of the productions that are multiplied by its means.

But were this multiplication of our producing power to be dreaded as an evil, were wealth to be measured by the cost of production, and value to be estimated solely by the labour used in producing processes, then must the economy in agriculture on which manufacturing industry is based be dreaded as an evil. Every improved process in manufacturing would diminish the wealth of a community.

It must however be evident that as the manufacturer requires food as well as the farmer, there can be no room for him until superabundant food is provided wherewith to nourish him. Again, if the farmer is to have clothes, he must either devote some of his time to make them, or must grow food for those who do so for him. Both plans have been tried, and the latter has been found the most efficacious. Men are brought to adopt this arrangement by means of that capability of the mind which I have pointed out to increase its desires where there is a possibility of satisfying them. Until food is supplied, man scarcely feels any other want. Hence the manufacturer takes the second rank in the industrial scheme. The demand for what he produces grows in proportion as food and raw materials cheapen. The farmer, by extending his scale of production and reducing his *rate* of profit, both increases its *amount*, and forcing his competitors into the new fields of industry which he thus opens, the increased profit is divided amongst fewer claimants.

The important place in political economy which manufacturing industry is entitled to occupy has not yet been clearly pointed out. The celebrated treatises on the science of the last century, in which the largest views have been propounded, were composed before manufactures had attained that development which makes them for some countries a matter of so high an interest, as to absorb many other economical considerations. Even in recent treatises we do not find manufactures clearly distinguished from handicraft arts. And yet it is of the utmost importance that this distinction should be fully comprehended. *Factory industry*, to the products of which the common term "manufactures" is still generally applied, differs from handicraft industry in the nature of the *force* which it employs to work tools. The mere use of machinery does not sufficiently characterize a factory, because we ought then to look upon the work

done by a turner at an ordinary lathe, or even the process of pumping by hand, as factory work, because performed with the aid of machines. The distinction is an important one which applies to the *force* used to set an instrument in motion, rather than to the *use* of any particular tool or machine, because any other power than that of the human hand is capable of indefinite augmentation, and replaces corporal drudgery by an appeal to human intelligence.

In order to define clearly the respective fields of factory and handicraft industry, it may be well to confine even the term *machinery* to the engines set in motion by other agents than the human hand, and to call utensils worked by hand-power *tools*, even though they magnify the power of the human muscles. In this manner the common pump, forcing-pump, and lathe would be termed tools, because the force applied to them is manual labour. They would become machinery as soon as animal force, air, water, steam, or chemical agents are used as their impelling forces. Thus, wind, horse, and water-mills, watches, ships, Mr. Clegg's atmospheric pressure tube, the galvanic trough, steam-engines, and the instrument named the Daguerreotype, are all machines, notwithstanding that they vary from gigantic dimensions to the compass of a pocket instrument. Thus, literally, handicraft labour is but the first stage of the development of power; machinery is the last and highest. The moving principle of machinery is a *secondary means*, not created, but discovered, and applied by human intellect. After a scientific distinction of this kind between handicraft and factory industry has been adopted, it becomes easy to follow the economical laws by which the growth of both is regulated.

According to our theory of power by means of handicraft skill, the usefulness of an individual to his fellow-creatures is exhibited in its most limited form. For ages the world had little other than manual power to command for the supply of some wants of the first necessity. The preparation of clothing, as we know, both in ancient and modern times, was long a domestic occupation, and as few were supplied by the labour of others with clothes and linen as with food. But as the spinning-wheel only made men more choice in their style of dress when it was substituted for the spindle, so the progress to machinery has only furnished a better supply of clothes than before existed.

The erroneous estimate of the value of man, which so much

retarded the progress of agriculture, impeded, in a proportionate degree, the detection of the grand source of human freedom and enjoyment,—the mechanical and chemical agents. Even the water-mill was unknown to the ancients, whose slaves pounded the corn in mortars, that furnished the household meal.

It has been the custom to call a factory any assemblage of workmen united by a single master, and to distinguish by the name of manufacturers all workmen who adapt the raw materials furnished by the earth for other purposes than food. There can be no good reason alleged for distinguishing the maker of butter and cheese, or of wine, from the spinner of cotton, and it would be useful if the agriculturist looked upon both in the same light. The thresher by hand, and the dairymaid, are of the same class of labourers with the hand-weaver and hand-printer. These are handicraft arts, and differ in the points I have mentioned from manufactures. Strictly speaking, an irrigating canal and a drain are machines. But it is easy to show the distinction between handicraft and manufacturing industry in every branch of production. The economical rule to which it leads in practice is the following:—Manufacturing industry depending upon forces that are capable of almost infinite multiplication, the sole limit to the extension of factories lies in the state of the market. It is, therefore, the business of the manufacturer to study the rule which I laid down in my first lecture, and to endeavour to augment his profits by extending his sales. Manufactures for this reason ought, in the first instance, to embrace all articles of necessity. Indispensable articles of food, especially grain, ought to be cultivated on a manufacturing scale. The greater the success of the manufacturer on a large scale, the larger will be the savings of his customers. This fund is what must defray the cost of handicraft industry, which, being practised on a small scale, proportioned to its more limited market, requires a higher rate of profit than will repay the manufacturers. In this position should our dairy farming and market gardening stand to the production of grain and cattle fodder. In the same relative positions should plain weaving, dyeing, and printing, stand to embroidery and painting. In many branches of production the first stages are effected by manufacturing, and the last by handicraft processes. Thus, to allow of profits in watchmaking and in cutlery, the miners and founders ought to be manufacturers. The more cheaply they furnish copper and

steel, the more the cutler will sell worked up into polished blades. The cheaper bobbinet is produced, the more employment there will be for embroiderers. The more abundant cloth grows, the higher tailors' profits and their journeymen's wages are likely to be.

The substitution of machines for manual power, which forms the great boast of our age, is the most successful result of the application of intelligence to industry. The first apparent change effected by it is to transfer production from small to large establishments. The spinning-wheel and lace-cushion give way to mills and factories.

This substitution being the foundation of a new social and political scheme, demands a precurring fulfilment of several of the conditions which I stated in my first lecture to be indispensable, where industry is to make progress.

The outlay that machinery requires, and the great number of hands which it collects in one establishment, make it necessary that the disposition to associate should prevail, and its advantages be thoroughly known, before it can be adopted. Again, the extent of these investments makes the security of this description of property a matter of greater importance than the smaller investments in tools, where hand labour prevails. The history of industry, in almost every nation, records instances of the attraction of manufacturers to new, and of their banishment from old seats; sometimes by the oppression of rulers, and at others by the violence of factions. As a result of the turbulence of the popular factions in the cities of Bruges and Ghent, in the fifteenth century, many of the trades migrated to Antwerp and to the Forest of the Ardennes, where the flourishing town of Verviers now stands. The popular commotions in Cologne drove weavers from that city into the same neighbourhood. The revocation of the edict of Nantes, which was the charter of religious liberty, cost France the bloom of her manufacturing population. Under the reign of the bloody Queen Mary many cloth-weavers migrated from England to Frankfort on the Maine, and had they not been recalled under Elizabeth, would, doubtless, have added a new element of wealth to that industrious city.

Factories and machinery moved by mechanical power cannot be removed, and therefore will not be erected where there is no prospect of security. The example of the continent, where, until long after the peace of 1815, machinery was but sparingly

introduced, shows that a feeling of security is an essential condition of the establishment of manufacturing industry. Even in France, of 1969 steam-engines at work in 1837, only 59 were erected before 1820; 1368 were built after the revolution of 1830. In the last century no other country in Europe could have adopted machinery to the extent that it was introduced into England.

It is the exposure to the ravages of war that renders our continental neighbours timid in embarking in manufacturing. The land cannot well be taken away from its owners, even if it change its political bond. But this very circumstance may prove fatal to a manufacturing establishment. The commercial policy, or domestic laws of the state, to which a country, after a war, may chance to be annexed, may differ with regard to the object it produces. They may discourage its use, or they may stifle all demand for it by what is called protection. But the danger to be dreaded from war is rapidly diminishing before a better insight into the interests of individuals and of nations. We must not shut our eyes to the inevitable consequences, in this respect, of the advance of civilization. The certainty of peace will be accompanied by certain competition. But are we to shun this test of intellectual power? Assuredly not. As no champion can be recognized in trials of muscular strength, but he who courts opponents that he may display his prowess; so there can be no triumph of intelligence—even no assurance of security—for those who withdraw from the race of mind and shun competition.

Manufacturing is likewise impeded in the majority of the states of the continent by the legislative systems of those countries. In all, the welfare of the people is supposed to depend rather upon certain modes of dividing the land, and of carrying on trade, than on the general state of intelligence. In some, a singular inconsistency is observable, the governments encouraging the spread of knowledge and the development of intellectual power, but withholding from the people the privilege of using the power thus obtained for their own benefit. The refusal to allow a share of political power to large and useful classes nourishes a feeling of insecurity, because these nations do not repose confidence in the classes that now arrogate the right to decide upon their country's fate. The manufacturer who belongs to a high state of civilization distrusts political forms that were a useful resource in less cultivated periods, when land was the only property. The greatest

detriment to manufacturing industry has, however, been occasioned by the distribution of the mass of the people in small agricultural establishments, where each grows little more than his own food, and that of course at the sacrifice of nearly all his labour. The dearest corn raised in Europe is perhaps to be found in some parts of Germany, where, on the other hand, grain can scarcely be sold at market. In such countries, there being no saving which can accumulate and provide capital to be employed in reproduction, the progress to wealth is necessarily slow.

On the banks of the navigable rivers, and in places where the traditions of manufacturing industry were preserved from the middle ages, factories have within a few years sprung up, Saxony, Rhenish Prussia, Silesia, Belgium, Alsace and Normandy in France, and some of the cantons of Switzerland have made considerable progress in organizing manufactures. Under simpler systems of government and protection against legislative interference, these attempts would soon prove successful and would induce imitation. It is chiefly to the measures adopted to force their success, that they owe the difficulties which they contend with.

In my next lecture, I shall point more in detail to the nature and extent of the competition we have to expect from our continental neighbours. Here I shall confine myself to the results which rivalry fortunately produces upon manufacturing industry.

The dread of competition, that is so general, arises from the proneness of the most practical mind to error in calculations of detail. Were manufacturers, agriculturists and labourers accustomed to reason from general principles, they would be put upon their guard against the dangerous fluctuations of prices: they would analyse the causes of their advance and decline, and would measure their exertions and their expenditure by a sound standard.

The cheapness of iron, the result of economy in mining and foundry processes, has at once stimulated and nourished the desire to substitute machinery for manual labour in England. To the invention of the hot blast for iron furnaces, and the consequent increased production of that metal, we are probably indebted for railroads. The late low prices of iron promised to cover the ocean with iron ships. We can set no bounds to the probable extent to which consumption may extend, because, even when our calculation of the nature of the home demand is ex-

hausted, we find nearly every country around us denuded of the means of obtaining wealth and enjoyment by a limited supply of iron. No instance can illustrate more forcibly than the iron trade the truth of the important proposition,—that the consumption of a necessary commodity will always keep pace with increased production at reduced prices.

The beneficial effects of competition are as evident, when directed on engineering processes, as they are in the case of food. On the success in engineering, and the precuring processes, mining and smelting, depend the production of every country, the wealth and happiness of mankind. How gratifying then to the mind is it to see, that the exertions to which the engineer is urged, by the force of competition, are accompanied by the reward that an extended market must yield! Every practicable decrease in his rate of profit must augment the amount of profit that he takes. To the recognition of this providential ordination, and its adoption as an economical law, we must owe the triumphant reflection that slavery *can never* again hurl man from the proud position in nature that is his birthright.

The masters' as well as the labourers' profits are increased by cheapening the cost of production: it is, therefore, no wonder that in a stirring age a vast number of minds are directed to invention. There is, consequently, no security for any one that the process he has adopted may not be hourly superseded; and this is, fortunately, the view taken of their position by both artisans and manufacturers of England, as is proved by the evidence given before the parliamentary committee in 1830. A current estimate has even been formed of the probable duration of a process; and it enters generally as a factor into the calculations of profit. This is as it should be. But such a calculation only determines a mean between two extremes, the lowest of which, if experienced where no due precautions have been taken, may entail the destruction of the fixed capital employed.

Perhaps a more scientific mode of planning manufacturing edifices would protect the capitalist from the heavy losses often incurred by the adoption of new processes. But the danger the manufacturer thus incurs shows the necessity for his making the strictest economical calculation before fixing a large amount of capital. Hence the weakness of building upon so unstable a foundation as prices, and the importance to the manufacturer of a general view of the laws governing production and consumption.

Protecting duties, monopolies, and bounties are all lures to the unsound investment of capital, as the experience of our own country, and the ill-chosen sites of numberless factories abroad, testify. Even patents, if speculated upon too far, are liable to lead into this error. Nor does there seem any encouragement held out to intelligence beyond that of an assuredly extended market, which is exempt from the chance of misleading. As an instance of incautious investment, I may mention that the very last large spinning-mill erected in Germany is at Augsburg, a city to which there are two hundred miles of land-carriage from the nearest navigable point on the Rhine.

Independently of the direct dangers to which the property of the manufacturer is exposed, from the elements and the decay of prosperity amongst his customers, we see that his is a position which especially demands an exertion of intelligence. This obligation becomes more and more urgent in every early branch, and the manufacturer of machinery is more affected by it than any one else. He may be said to *feed* the other branches of manufactures. *They* must have machinery, as *we* must have food. There can be no protection for machinery, or for metals, because any country suffering under such an infliction would immediately see its manufactures carried off by intelligent neighbours, who had cheaper and more efficient machinery. Cheapness, from competition, always leads to improvement. Belgium has protected its machinery, and almost ruined its manufactures; Prussia and Austria have done the same, with the same result. We were foolish enough to exclude, by high duties, foreign manufactured metal, and the result has been a deterioration in the quality of British iron that is notorious. Now one most evident conclusion that we must draw from these facts is, that the engineer, above all manufacturers, is bound to study the only sound rule for the tradesman, which compels him on all occasions to reduce his prices to the utmost, the certainty of increasing his sales being the premium held out to him to do so. The capital embarked in this species of manufacture is, therefore, altogether dependent on the insight obtained by all connected with those establishments into the nature of the association they form. The employer must see that he can only obtain sales by meeting the most active competition in the market: the whole manufacturing, the whole consuming world are leagued against him. The manufacturers cannot meet their rivals in the home or in foreign

markets, unless they have equally cheap machinery ; the consumer will everywhere take from the cheapest manufacturer.

It is clear then, that if operatives are to get good wages, they can only find work by the willingness on the part of capitalists to enter into this stirring race. The possibility of manufacturing depends upon the intelligence of the few men possessing large capitals, ~~and~~. It is the *concentration* of capital that makes it effective. Pre-eminent intellectual and social capabilities are required in those who are to make even concentrated capital efficient. It is—I will not say the operative's duty—it is to his interest, to lend every possible aid to the men who undertake this task—to those who make the sacrifices which, under present circumstances, the manufacturer does make ; since it is to the intelligence, to the diligence, to the perseverance, to the patience of the employers, that the operative owes the possibility of obtaining improved work and good wages.

I know it will be said that this most useful class of our fellow-citizens is not actuated by patriotic motives in subjecting themselves to all the risk, to all the toil, they now encounter in prosecuting their occupations. Gentlemen, all we have to consider is the happy circumstance that *any motive* will induce a man worth £50,000 to devote himself to the accomplishment of the great scheme that confers such benefits on humanity. Whatever may be the motives that actuate manufacturers individually, the result is the same : they create abundance for the consumer, and combine that abundance with high wages for their associates, who are, in their turn, consumers. That their profits are likely to be large where property is secure, is only another and a beautiful dispensation of Providence, which has made the prosperity of one man the condition of the prosperity of another.

But this law is one that requires to be studied by those who derive benefit from it. This is no law intended to release us from the smallest exertion of intelligence. We must seek to comprehend its scope, to secure its operation in daily life.

I invite you now to the most important part of my subject,—the theory of Wages. Here we shall again see the importance of establishing correct *principles* as forcibly illustrated as in the case of Rent, which I treated in my last lecture. The notion that rent could only be obtained from food, and that to obtain rent food must constantly rise in price, has led to the following conclusions respecting wages : “The profits in trade being the fund

to be divided between labourers and employers, profits can only rise when wages are reduced, and wages can only rise by encroaching on profits." Now, were this strictly true, it would still be the operative's best plan to assist in forwarding all improvements, for, if they did not add to the amount of his wages, they would very much increase their value*. As a consumer he would, with every improvement, be able to purchase more for the same sum. It is however *not* true and rests upon two gross errors. One of these assumes an inevitable constant rise in the price of food—a fallacy that I exposed in my last lecture. The other, to which I have also generally alluded, lies in confounding the *rate* with the *amount* of wages and profits.

Profits, of course, form the fund out of which wages are to be drawn. Now the manufacturer is not exempted from the general obligation that, we have seen, includes the agriculturist. In manufacturing industry the number of objects that must be produced, upon an extensive scale, in order to secure their general consumption, is quite as great as in agriculture. But for these we have no new worlds that we can resort to. The unpeopled savannahs of America and the waste tracts of Europe give us little direct aid for the extension of manufactures. They must grow food cheap enough to attract inhabitants before occupations, requiring little space, can be removed to them, or spring up there.

In this case, it is to the moneyed capitalist that we resort, to men whose industry has created, and whose enterprising spirit prompts them to venture, a large accumulated property, must we look to take this upon themselves. They alone can *reduce their rate, to augment their amount*, of profit; and we know that, by following this plan, abundance is universally diffused. Both money and land are capital when employed to assist reproduction. But a serious distinction has to be drawn between land and buildings, or machinery. Land can be applied to all pur-

* The following is Mr. M'Culloch's view of the subject:—"It has been already seen that the cost of raw produce has a natural tendency to rise in the progress of society, and as the greater part of the wages of labour is laid out on its purchase, it is plain that the *rate* of wages, though occasionally reduced by improvements in agriculture, manufactures, &c., must also have a natural tendency to *rise* as society advances and population becomes denser."—*Note vi. to Adam Smith's Works*, p. 474.

This is tantamount to saying that the *amount* of wages taken generally must fall. If therefore the cost of raw produce can be made to fall as population increases, not only will the amount paid for wages rise as their rate falls, but it will go further than before.

poses. It can be planted, tilled, grazed, converted into a garden, or built upon. Hence in my first lecture I drew the conclusion, that those must be very narrow-sighted landowners who think they are only interested in the success of farming. The landlord's interest is involved in the success of all industrial undertakings. It is most deeply concerned in the rise and spread of cities, towns, and villages. The landlord who feels all the importance, all the responsibility, attaching to this position, is advantageously situated when compared with the manufacturer. He should in all phases of progress be looked to by his fellow-citizens as their natural ally, their encourager, their friend. This position however does not result from his merely owning the land; it clearly can only be gained by his applying it to the proper use. The landlord's test is also an intellectual one. His possession, under circumstances of free competition, will only be valuable where intelligence is exerted, and then it will be more valuable than any other.

But the manufacturer's investment represents, usually, only one phase of industry. The concentration of intelligence upon manufacturing processes perpetually endangers his hold upon our wants. New inventions unexpectedly supersede the most approved processes, and I believe that, in the current estimate, any approved engine or manipulation is only valued at three years' purchase. It is worthy of notice, that the first large factory for plating by the galvanic process was established at Birmingham, a town whose prosperity has hitherto been assured by a command of coals for steam power and for foundries. Of course, the notion of protecting a branch of industry thus open to the most active competition at home from the wholesome stimulant of foreign rivalry, resembles rather the conduct of those old women who smother children with swaddling clothes, lest the air of heaven should harm them, than the calculations of reasoning men.

In the risk arising from rival skill, the operative is only concerned as a gaining party. A new invention, if successful, demands hands to work it; and if it is so triumphant as altogether to supersede its predecessors, the market being extended by it, the *amount* both of wages and of profits increases, although their *rate* may fall. The operative does not share the risk arising from chances of war to the full extent. Men are always worth a certain sum for bayoneting or to be shot at,—not thirty shil-

lings a week, but at least something. In a hostile invasion the greater part of factory industry would be destroyed. The experience of the continent proves this, where the factories were ruined at the period when what is called protection was rigorously enforced under Napoleon's continental blockade.

But there are risks which the labourer shares with his employer: these are all such as spring from bad legislation, or the disturbance of social order at home. Whole branches of manufactures are suppressed; others find their markets destroyed, or limited by duties imposed on erroneous principles. Our glass works produce none of the beautiful coloured glass that is now common in Austria and Germany. The excise laws hitherto prohibited it. Soap and other articles of the first necessity after food, and of which the consumption would, at a cheap price, be unlimited, are much restricted in use by the duties imposed upon them. In Austria a direct tax is levied on traders and manufacturers of all kinds, varying in the large towns from £10 to £150 per annum,—levied for the mere privilege of being industrious. A very natural result of such taxation, coupled with delays in licensing, is to discourage small beginners in trade. A curious declaration has been elicited by this state of things from the Austrian nobles and landowners, respecting the value of manufactures for the landed interest. Nearly all have taken to manufacturing themselves, and the greater part of the large Austrian factories are carried on in the names of the nobles. Count Salm, Prince Dietrichstein and Prince Coburg are iron-founders and engineers, Counts Bucquoy and Harrach are glass manufacturers, Baron Dalberg and numerous other nobles make beet-root sugar. All large landowners are both brewers and distillers, and many enjoy the privilege of retailing malt and spirituous liquors on their own estates. I do not mention this in a depreciating spirit. I can see no difference between the production of grain or of glass, iron or clothing, excepting inasmuch as one may require more ingenuity than the other. The testimony of these nobles to the advantage derived from manufacturing industry by all classes is what I wish to point out, because it shows the folly of legislating to discourage them; and that the operatives, to whom they give employment, are served by their enterprising spirit, cannot be doubted. Another and a serious cause of danger to capital invested in manufacturing undertakings arises from social misunderstandings, which

have frequently the effect of changing their seat. Corporation restrictions to preserve monopoly, or to favour irresponsibility, are a constant barrier to manufacturing progress. Limitations of the right of settlement in towns, by preventing the accumulation of operatives in favourable situations, are also injurious, and are a constant impediment to their introduction into many continental states.

But the most singular danger they are exposed to arises from the false theory, which assumes that the profits of manufacturers are amassed at the expense of the operatives whom he associates with him in his undertaking.

It is strange that this doctrine should be directed against parties who, by large investments in machinery and buildings, give a guarantee that they intend to carry on business on the fairest terms. Whatever advantages the manufacturer starts with, whether of connexion or of particular skill, he cannot be protected against that competition which large profits are sure to invite. Now, if I have made out my scale of profits, or rather, of the modes of creating them correctly, the manufacturer can only escape from this competition by extending his enterprise—by reducing his rate of profit to obtain larger sales. This he cannot do at the operatives' expense, because the lowering of his price opens new fields of trade, which compete with him for workmen. Power-looms did not reduce weavers' wages: they created such a demand for bleaching, dyeing, and printing,—for packing, carting, shipping, shopkeeping and dressmaking,—that the manufacturers were obliged to give their workmen treble the amount of wages that hand-weavers of plain calicoes could get. Now, I would ask, what combination could treble wages? The improved machinery did it for those countries of Europe and for those counties of England, where capitalists were induced to come forward and erect machinery. On no other terms could it have been accomplished; in no other places has it been done. As the source of the low wages of the agricultural labourer is to be sought in the bad business done by his employer, so the fund from which alone high wages can be obtained by the factory operative is the profit of the capitalist.

A similar diagram to that which I used in my last lecture to illustrate the theory of rent, will serve to explain the economical progress of manufactures. If we represent the *rate* of profit as indicated by the figures in each compartment, the various branches

of production will stand in a position with regard to each other in some measure thus :

Mining	Engineering.	Ships and Roads.	Mills and Factories.	Distributing Shops.
10	20	30	40	50

The figures indicating various proportional *rates* of profit are of course arbitrary ; but we must acknowledge that the engineer has the better prospect of profit when mines are cheaply worked, as the millowner has when the means of transport and machinery cost him little. The distributing shops may represent all the handicraft trades that depend upon the perfection of the other processes, both for supplies to distribute and for savings wherewith to form the fund required for increasing production. We saw in my first lecture that the *amount* of the miner's profits need not be less than those of the engineer or millowner, although there is so great a difference in the *rate* obtained by each. The important point to hold fast is, that in any of the primary processes this amount can only be increased by lowering the rate. The amount would diminish if the rate were raised, because the sale would fall off in a more rapid proportion than the price could be augmented. Of course, the lower the rate of profit, the larger will be each establishment where the organization of industry is well understood.

A similar diagram will illustrate the position that one manufacturing process stands in with regard to the others. They may be said to stand thus :

<i>Engineering,</i> <i>Cotton-</i> <i>Milling.</i> }	Moulding, Cleaning.	{ Turning and Planing, Roving. }	Fitting, Spinning.	Polishing, Weaving.
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An increased efficiency imparted to the labour used in any of these processes re-acts upon the rest and stimulates all. Any saving in moulding or in cleaning, and in roving cotton, would create a greater proportionate demand for hands in the later processes than were previously required, for the simple reason that the improvement, having reduced the cost of production, would increase the demand for the object produced.

But the operatives may complain that it is hard for them to

be dependent on the goodwill and abilities of the capitalist, for the means of using their power effectively. To this I would reply, that their power really only lies in their intelligence. Their arms are only substitutes for machinery, until inventions supersede them. I would not here be mistaken. Men do not become dispensable generally by the introduction of machinery: their occupation is changed, their task is elevated, their share of profit is enlarged, where machines are used.

Even skill in hand manipulation is superseded by machinery as manual labour is. The most skilful hand could not accomplish the precision of copies that machinery effects. The exact thickness of bars or of threads, the exact spread of colours, independent of exact calculations of time, can only be attained satisfactorily by machinery. No coining engine will produce a medal so exact as can be obtained by the galvanic process.

But you may object, gentlemen, that I am taking away from the operative all claim upon the interests of employers; that I am destroying all the distinctions that study and diligence raise up for the reward of the good workman.

No, I am not doing this; I am only calling your attention to those qualities in man which machinery cannot supersede—to that power which is exclusively his own—to the value of his reason, of his intelligence. The extending scale upon which all processes have to be performed, the exactness with which copies are multiplied, open for the skilful a new field of exertion—that of originality of design. When copies are to be had for little trouble and cost, then will original productions of every kind acquire their true value, and thus will man's intelligence ultimately triumph over machinery. The road to this field of spontaneous exertion can, however, only be found through the perfection of machinery; for the necessities of all must be satisfied before all can indulge in the luxury of intellectual exertion.

For the operative who contributes to this grand consummation by giving machinery its proper efficiency, an early opportunity is afforded of using intellectual power. If manual dexterity is superseded by the machines he wields, another and a more beautiful field is opened for him,—one which extends with the growth of establishments—that of *trust*. As an associate, every operative in a factory is entrusted more or less with the prosperity of all engaged in it. Whatever be the difference in the nature of the work assigned to each operative, the trust that is reposed in him

is now the true measure of his value. It is by displaying a consciousness of this hold upon capitalists that operatives command the highest wages. Where they are trustworthy, the greatest number of persons will engage in trade, and the demand for hands must improve wages. Where there can be no trust there will be no enterprise, and competition from other parts will soon transfer industry from districts that reject this test of *moral* efficiency*.

It is because strikes and combinations are incompatible with this test, which gives every man the means of displaying those qualities that adorn humanity, that I must declare my sorrow at seeing them anywhere advocated. The interference with the right of any man to earn his living in the way he chooses cannot be delegated to any of his fellow-creatures; the right to carry his skill to any market he may select, he must be free to exercise. Restriction in this case is robbery; but to threaten and intimidate any who exercise their right of practising a moral quality, of showing themselves to be trustworthy, cannot be tolerated in a civilized community. The interference of any third party in the free compact between capitalist and operative is a despotism that, if established anywhere at the present day, must inevitably entail ruin upon the community that submits to it.

You may reply, that I have myself advocated the principle that every man must do his own work and take care of himself. The indication I have given of the field in which the operative *cannot* do anything but aid and stimulate the efforts of the capitalist, does not preclude my inviting, nay urging, him to activity in another sphere, where he *can* do much, and *must* do it himself. I shall best explain my meaning by at once pointing out what I think

* What else can account for the different wages paid in the same places? Mr. Finch gave the earnings of 4387 families in one ward of Liverpool in 1840, as follows:—

1342 families are without visible income.			
310	...	earn less than 5s.	per week.
845	...	earn from 5s. to 10s.	per week.
610	...	10s. to 15s.	...
727	...	15s. to 20s.	...
512	...	20s. to 30s.	...
41	...	30s. to 40s.	...

4387

The earnings of these 4387 families amount to £2023 19s. per week, being 9s. 3d. per family on the average; which, reckoning four persons to each family, will give an average of 4d. per day for 17,548 individuals.—*Statistics of Paus-hall Ward.*

lies within his power. We can trace the notion that labourers can only be remunerated at the expense of their employers, while profits are extracted from the sinews of the operative classes, to the original error that assumes all rent to proceed from dear food. The economists of this limited school, who have descended from the intellectual height upon which man was placed by his Creator, and have acknowledged their moral and physical dependence on the earth they tread, declare that food must constantly be raised with increasing difficulty. Dear food leading to restrictions in trade of course makes it desirable, because necessary, that labourers should be few in number. Hence, in the eye of an economist of this school, it is moral to abstain from marriage. This beautiful morality, like the view of wages, which supposes them to detract from profits, has its origin in that fearful theory of rent which I exposed in my first lecture.

There we saw that the dread of lowering rents by cheapening corn discouraged education, lest it should lead to improvements in farming. Here you are told that the welfare of the nation, and of the labourers themselves, depends upon their numbers being thinned. To men possessed with these views, the ships that leave our shores annually with thousands of industrious fellow-subjects confer a benefit on us,—the mortality that prevails in insalubrious trades must be an advantage.

Now the whole of this fabric falls to the ground together with the theory that rent is necessarily dependent upon high wheat prices. Dismiss this notion, and you find no difficulty in every man's earning his own food, and a great deal more besides. Look upon every increase of productive power as the stimulant to new wants, and as causing new demand for labour; then will master and labourer see that, instead of there being too many hands to employ, there will be rather too few; then shall we realize the good old English proverb which says, "The more the merrier."

Every operative commands means of raising the wages of labour that derive from the principle that has been adhered to through all these lectures. Saving is the source of abundance; if saving can anywhere be effected, a fund of wealth is at once created. Now, although many may think they are not extravagant, yet the fact is undoubted that every inhabitant of these realms squanders large resources. A delightful instance of the power of savings is afforded by the practice of temperance. A deficiency is noted in the excise duties of £800,000, which is

ascribed to temperance in the use of spirits. This amount of duty corresponds to a consumption of perhaps 1,400,000 gallons of spirits in Scotland and Ireland, and 800,000 gallons in England. The gain from this abstinence, allowing for adulteration, cannot be estimated at less than one million and a half sterling. What combination, may I ask, could have procured so large an addition to wages as this moral exertion? If we carry this mode of saving further in an account that every man may open with himself, we find that the spirit duty still exceeds £4,000,000. This shows, on a very moderate calculation, that £8,000,000 may still be saved by temperance without inconvenience. Now another very legitimate field of exertion for workmen is the saving that results from an amelioration of our system of taxation. I have alluded to the fund of £20,000,000 created this year by the reduction in our corn prices since 1840. The result you can judge from the improved condition of our factories, as compared with their state in 1840 and 1841. All were then working short time; all are now at full work. Now free competition in corn, by which I have shown that the farmer would be benefited, would, it may be assumed, reduce our average price of wheat to 30s. per quarter. This would add another twenty millions to the former, and would secure both as a permanent benefit.

Sugar is another article of necessity that might be lowered at least 20s. per cwt., under the influence of competition, with benefit to all parties. On four million cwts. this would amount to £4,000,000. Then soap, bricks, paper, glass, starch, and other exciseable articles, with all raw materials for manufacturing, now subject to import duties, ought to be freed from these restrictions on industry. The gain from this source cannot be estimated at less than £3,000,000. Every man's account with himself in these kingdoms would therefore stand thus, as compared with 1840, if by simultaneous exertion we obtained a change of our agricultural and commercial systems:—

<i>Dr.</i>	To amount to be saved on wheat . . .	£40,000,000
	To ditto on sugar	4,000,000
	To ditto on exciseable articles of necessity and raw produce	3,000,000
	To temperance in the use of spirits . .	8,000,000
		<hr/> £55,000,000

To this may be added the amount of saving possible under the suggestions of the Health of Towns Committee.

This, divided amongst five-and-a-half millions of families, gives £10:10s. per annum, or five shillings a week, additional to each. I am inclined to estimate the money saving that may be achieved by improving the health of towns at a sum equal to this. That all would receive their share, and that the operative classes would most benefit by the change, is certain. The stimulus to trade that must result from the creation of such a fund would cause a demand for labour, and again raise wages. But by the same process that raised the money price of wages, the value of that price would be improved. All necessary articles being reduced to half their price, wages would virtually double. What combination against masters could lead to this result, which is daily, nay hourly, to be obtained?

In my last lecture I spoke of the variety of crops which the land is capable of bearing, as the reason of the independent position of the landowner. I stated reasons for supposing that his most profitable crop was a crop of houses. This crop, gentlemen, is the true triumph of intelligence. When houses grow, man has well asserted his sovereignty on earth. But let no landowner believe that houses will grow like corn or grass at his bidding: this crop will only grow on conditions—on the condition of civilization.

Now where a crop of this kind is to thrive, the principle that every man has his task allotted to him, that none can do but himself, is usually most clearly illustrated. Its very productiveness debauches and enervates those who profit by it. We have seen that the boon of irrigation, and a proper application of the refuse of towns, is only to be obtained from the farmer by the aid of competition. How then are we to obtain irrigation and the application of machinery and drainage to town constructions from those who draw the profits of a crop of houses? Competition alone will secure this,—a competition based upon individual exertion. I will venture to give directions how to secure the comfort—the luxuries of large supplies of water and of gas, and of complete and cheap sewerage. To obtain them, the poorest tenant has only to demand them. To cause these indispensable requisites to be added to every house, you have only to make public your desire to enjoy them. No landlord will mistake the value of the opportunity you afford him of improving his property. It has been the notion that the working classes would show no preference for such advantages, that has hitherto prevented their being offered to them.

But I go further than this, and can even tell you why all can obtain, without paying for them, not only the comforts enumerated, but also the blessings of health and cheerfulness which they bring with them. An interesting calculation has been made of the extra sum that landlords demand as rent on account of the insecurity of their receipts. The causes of this insecurity are the chances of death, of failures, of stagnations in trade, the risk of fire, and other casualties that are preventible. A town supplied with the comforts I have named is, in a great measure, freed from the physical evils apprehended by landlords.

Those arising from moral causes are within our own control. A careful study of the theory of profits and wages, such as I have submitted to you, must show it to be the interest of all men to resist every attempt to disturb the harmony that should prevail between all classes of the industrious. A public declaration of this conviction on the part of the working classes, and steady repression of all attempts to excite unlawful aggression, would inspire such confidence that landlords would willingly make the necessary investments. The outlay, if judiciously directed, would not exceed eight per cent. on rent, or the sum now charged over the current rates of interest for the extra risk attending house rents. How high you may be inclined to rate this saving, which may be effected by a moral exertion like that which temperance has demanded, I shall not estimate. There can be no doubt that such a course, when once adopted, would lend to all, who entertain the views of reasoning men, a moral force in their capacity of electors, parishioners and members of associations.

In the language of Scripture, the labourer is worthy of his hire. We here see in what manner the benefit of the community is linked to the advantage of those who labour in its cause. Clear views of the field which in every country is open to the industrious man, according to the capital and the intelligence that he commands, ought to be imparted to all early in life. The manufacturer must especially distinguish between fixed and circulating capital, if he would escape loss. But above all he must seek to eliminate that element of gambling in his occupation which is induced by the uncertainty of our supplies of food. Much that is supposed to be mere speculation arises from this.

But I shall be asked, is there then no such thing as *over-compe-*

tition. Do speculators never ruin one another, and throw numbers of poor men out of work? This brings us to quite another field of investigation, but one which at the present moment is of peculiar interest. What is often called over-speculation—and really is so—proceeds more frequently from the fact, that the market is taken away from speculators, than from an erroneous calculation on their part. As the fund to be expended in comforts is only composed of the savings effected in necessities, so the fund to be spent in luxuries must be supplied by good economy in the two more urgent branches of demand. Anything that interferes with this natural arrangement must destroy a market somewhere. We have experienced this fluctuation within four years. In 1840, 1841 and 1842, there was great stagnation of trade; whole branches of industry were destroyed, thousands of operatives were without employment. If at that time there had been no competition,—that is to say, if no one had exerted himself to produce cheaply, or if many had not greatly reduced their rate of profit to effect sales,—there must have been still less employment, and many more thousands must have starved. The speculators were all at fault, not because people required less iron, less cotton, less cloth, less hosiery, or less lace, but because the fund that was to pay for all these less essential requisites in life was absorbed by the cost of the indispensable requisite, food. If the fund to be spent in all these things, and which creates a demand for labour, has been augmented by £20,000,000 in the present year, and has given increased prosperity to those who take advantage of it, a further reduction of 20s. per quarter would manifestly add as much more to the fund. Now, were the efforts that are directed to extorting high wages from employers, without creating any fund whence profits and wages are to be increased, concentrated on the improvement of the fund that we have pointed out, wages must inevitably rise, because there would be wherewith to pay them. The concentration of efforts in this direction, however, can only be based upon a conviction of the benefit of competition. It is only by subjecting the landowner to fair competition that the fund can be augmented, which is now curtailed by the high price of food.

There cannot be a better illustration of the advantages of competition than is afforded by the landed interest, which has long been in a stationary condition, and unable to raise such a fund to divide with the labourer as manufactures have yielded.

By averting competition from the growth of grain, those crops which are most suited to the soil and climate of the British Isles have, to a great extent, been banished to the Continent or to America. Butter, cheese, eggs, wool, flax, hemp, tobacco, rape and clover seeds, are imported in gradually increasing quantities from other countries, some of which could send us grain at about half the price. Again, the value of all these crops, as well as of garden produce, would naturally increase if food were cheap, because there would be a fund for them, as for manufactured goods, when money could be saved from the cost of bread. By opening competition in grain, the value of a wheat crop would then rate like barley or oats, and the farmers' *paying* crop would be one that had little value while corn was dear. It may be assumed that farmers would be no objects of compassion, if they were compelled to an exertion of intelligence that would fill their pockets. The manufacturer is obliged to exert intelligence, and they ought likewise to be forced to do so. Thus increased wealth springs up with sharpened intelligence, increased knowledge, stimulated activity. There is no close field for combatants, where they can choose their weapons and exclude competitors: the field is open for all; the most active has a right to the largest share of the spoil.

I venture to hope that ere long many of those processes which now deform the persons and narrow the intellects of our operatives will be transferred to machinery, and the only *labour* required will be that of the intellect*. That the path through which the industrial world is now advancing leads

* Mr. McCulloch in his first note says, "It follows therefore that all effects may properly be considered as the product or the sequence of labour of some sort or other; but their value is entirely dependent on the quantity of the labour of man, or of capital, that is, of the accumulated produce of the labour of man and of machinery expended in bringing them about." Mr. Senior has refuted this fallacy by alluding to the ease with which Sir Walter Scott wrote a novel, and which yet sold for more than the productions of much harder labour. Were Mr. McCulloch's proposition true, it would follow that sugar or other food grown by slave or hand labour ought to sell for more than what is produced by the new machinery. A number of slaves capable of producing 10 hhds. per week would cost about double the price of the vacuum pans suited for that quantity. The hire of so many Coolies would amount to double the interest of such an investment. It would also follow that the greatest demand for all commodities would be while the processes of producing them were rudest. How then would he explain the fact, that the exports and imports of all countries increase in value, even measured in coin, in proportion as processes of production improve and labour is economized? It is time to discard once for all the notion that man is destined to fill the place of a beast of burden.

eventually to this consummation, is undoubted. The prospect before us is one of constantly diminishing physical dependence and suffering, where an appeal from bodily to intellectual exertion is allowed. As what has sometimes been called the *intrinsic* value of a man's arms and shoulders for mechanical processes diminishes, the *exchangeable* value of his intellectual power increases, for the simple reason that more is produced wherewith to reward its exertion.

Now that this improvement has not been more rapidly perceptible, may be explained partly from the disturbing cause of the labour absorbed in procuring dear food. It is partly also to be accounted for by a natural effect of that cause—the slow accumulation of capital to be used in reproduction. Instead of complaining of a superabundance of capital now keeping down wages, we are inclined to think it is because we have too little capital that wages are depressed. More money, more machinery, more factories, would be our cry, if we thought that these beneficial adjuncts to our power would be obtained by any other means than the slow but sure process of industry, economy, and respect for property. The exercise of these qualities must be supported on the side of the wealthy by a corresponding moral course. Neither selfish sophistry, nor the plea of expediency, can any longer withhold from the working population the boon of cheap food, which would double wages at once for all the families of our operatives.

The skill and pertinacity with which altercations respecting the rights of employers and employed are carried on would, if transferred to the field where the universal enemy sloth lies coiled up within the wall of protection, soon furnish the means of restoring harmony with the growth of wealth, independence and intelligence.

LECTURE IV.

TRADE—PROFIT—WAGES.

WE have traced the laws that govern consumption and production through the two great fields of agriculture and manufactures: we have seen that they go hand-in-hand through the successive stages of our wants and enjoyments; and that while production, by furnishing constantly increasing abundance, attracts consumption, it is consumption, or the use made of what has been produced, that determines the field of production which it shall next be profitable to cultivate.

We have seen the independent position which man, by the bounty of Providence, occupies with respect to what are called natural resources. We have seen many countries rise into power without internal agricultural resources. We have found lands possessing manufacturing skill, transformed into vast workshops, whence half the world has drawn supplies of goods, the raw material for which has been supplied by the consumers. We have seen agriculture, obedient to the call of trade, expel the culture of one description of produce to make room for another, and agriculture itself make way for manufacturing industry. Finally, even manufacturing power is transient. An effort of genius suffices to fix the seat of manufactures in a sandy plain, on the banks of a stream, or at the mouth of a coal-pit. One of our last adaptations to mechanical uses is that of the electric fluid,—a substance of the subtlest nature,—to convey an impulse greater than is communicated by the fall of a ponderous mass. Nothing seems fixed, nothing stationary: the law of industry, like that of nature, decrees constant change, ceaseless activity, unrelaxed exertion, continuous motion.

But, independently of the silent and gradual changes thus constantly in operation, almost beyond our control, the surface of the earth is the scene of an unceasing activity, resulting from the daily wants of man. These, when left unrestrained, are constant and measurable, and we can both define and guide the activity which they call into play: they give rise to the current of interchange between man and man, between nation and nation, between hemisphere and hemisphere: they are the cause of trade.

By the aid of the trader, productive capital in distant countries is associated for the general good. The increased efficiency resulting from this association, which allows full division of labour, furnishes the fund upon which the trader relies, and it has at all times proved a rich one. If the Russian is to drink French wine, he must exchange for it, either directly or indirectly, the produce of fields, mines or forests, which form the capital of that empire. Of the imports of Great Britain, 60 per cent. are articles of food, 30 per cent. are raw materials for manufactures. They are paid for by the exports of manufactured goods produced in the factories which form the chief capital of England. If the association between the farmer and manufacturer, by multiplying the efficiency of the capital of each, enriches a country, the alliance of both with the trader again multiplies the former product. Hence we cannot wonder at the important part the trader plays in the progress of civilization.

We have seen that the Phœnicians emancipated themselves from dependence on their powerful neighbours, the Egyptians, by making their supplies of food a matter of calculation. This was effected by an intellectual effort, by the application of machinery to trade: their machine was *the ship*. With the aid of navigation, Tyre, and its great colony Carthage, attained a rank amongst the leading powers. The political influence of Greece depended upon the supremacy at sea asserted by her leading states. It was on the ocean that Rome had to contend with Carthage for the supremacy of the world.

The sovereignty of the ocean is the stepping-stone to political supremacy, because the successful power can become a protector of trade. Trade affords nations in a backward state the means of improving their condition: it presents to lands in which industry has made some progress, the means of turning this advantage to the best account. The trader is the universal friend; consequently he is the most powerful ally and the most dangerous rival. Yet his first appearance on any new field of activity has been constantly a cause of apprehension, and his property has usually been no more secure than that of the manufacturer. From the circumstance of trade creating wealth, it has at all times been taken for wealth itself, and has been exposed to rapine from kings, legislative bodies, and mobs.

The secret of the great extension of the Roman empire, and of its duration long after the decay of its capital and the turpitude

of its leaders was notorious, may perhaps be traced to the fact of its name having served as an excuse for unrestricted traffic to more than one half of Europe. The Roman empire was in fact an immense "Zollverein," and its capital, we know, was furnished with supplies of all kinds from the more productive regions of the earth. Had intellectual cultivation been studied so as to raise the people above the dangers arising from this abundance that surrounded them, what could have overturned the Roman sway? The decay of the Roman empire dates from the period of its moral decline; this involved many economical errors. It fell as soon as the system of taxation, so ably described by M. Guizot, pressed with destructive rapacity upon the rich citizens, and checked the ardour of commercial enterprise.

Under all the powers that have attempted to rule on the earth, has the trader sought a shelter from his foes. In ancient India, in ancient Egypt, the religious festivals were periods of trading interchange, and even now the Mecca pilgrimage perpetuates in Mahomedan lands the remembrance of the sanctity attaching to the character of the trader. The Roman military stations rendered the trader the same service, who repaid the obligation by conciliating the goodwill of the conquered, and presenting to them the means of paying their tribute. The overthrow of this protecting power, by its own demoralization, deprived the finest part of Europe, for centuries, of all the advantages of trade,—a circumstance that undoubtedly favoured the extension of the Mahomedan conquests. Rude warriors from the North, jealous of any influence but that which they could control, would not suffer an appeal to social relations which they did not understand, and still less to an element over which they had no power.

The extent to which insecurity of property arising from these oppressive circumstances impeded the development of the prosperity of Europe, is strongly exemplified by the fact, that the first cities and states which emerged from barbarism were such as by their position were inaccessible from the shore.

Amalfi can, to this day, be reached from the land side only, by a mule-path, that passes over a high and steep rock. Half a dozen resolute mountaineers, in ancient times, must have sufficed to guard its passage against the most rapacious or invulnerably clad men-at-arms. In the Saracenic cities of Sicily, Syracuse and Messina, the merchants of Amalfi learned the hos-

pitality that fosters, and the arts that promote, trade. In the tenth century they had warehouses at Cairo and Alexandria, and the Syrian coast was known to their mariners. In 1020 the venturers of Amalfi received permission to build a church, and found the celebrated hospital at Jerusalem, which proved afterwards so splendid a monument of their fame. Their code of naval law was a pattern for the other States of Italy and the Levant, as they rose in succession, and long formed the standard of justice for the Christian powers in the Mediterranean. From their intercourse with the Saracens it is now supposed that the Amalfitans learned the use of the mariner's compass, which they long had the credit of inventing; and it is an established fact, that the use of the compass was known to the Chinese in the third century of our æra. From these intelligent orientals it is probable that the Arabs learned its use, and of course it was immediately adopted by the Saracen navigators of the Mediterranean. It seems probable however that Flavius Gioja, or Gisias, a native of Positanum in the duchy of Amalfi, made the improvement in the compass of suspending the needle on a polished pivot: before this change the needle swam in water, but performed its functions, even then, in a serviceable manner. In the fourteenth century Amalfi disappears from history, having, like the Phœnicians of old, served as the pioneer for states of greater or better cultivated resources. Neither Genoa nor Venice possessed originally more agricultural resources than Amalfi. Like the last-named city, Genoa stands inclosed by rocks that defy approach from the land side; but its site is on a grander scale, and offered more resources available to art than the position of Amalfi. Pisa, lying in a limited but fertile plain, was in the first instance more independent of trade for supplies of food than either of the other cities: Pisa too conquered and took the fertile island of Sardinia from the Saracens; but these advantages did not give her any superiority,—Pisa sank under the rising influence of the Ligurian republic.

A trait that strikes us in the early commercial history of all the Italian seafaring states, is their readiness to fraternize with the Mahomedan powers, when a hospitable reception was offered them. The tendencies of trade are humanizing. There is nothing in the distinction of creeds which need prevent the exercise of the simple duties of the trader. During the period of the Crusades, the road through Trebisonde, from the East, con-

tinued to be the most secure from interruption. The trade with the Black Sea, therefore, engaged a large share of the attention both of Genoa and Venice. Venice directed its influence more to the cultivation of the trade with Syria and Egypt. The trade through the Dardanelles was there long considered as but of secondary importance. Genoa, on the other hand, had from the beginning endeavoured to secure all the advantages of the Black Sea traffic. Her alliances with the Greek emperors caused the suburb of Pera at Constantinople to be ceded to her merchants, and their vessels were allowed to trade, and even to settle colonies on the coast of Tartary. Grain, which then (as now) was to be procured at the mouths of the Dnieper and the Don at the lowest possible price, proved one of the best articles of traffic at the great trading staples of the Mahomedans. In most of the treaties of commerce and friendship concluded by the Genoese, a stipulation is found, both for a freedom from duties on the corn which they carry, and for the liberty to re-export freely what they do not sell in any harbour. The possession, by the Genoese, of this key to traffic wherever they went, could not be eventually a matter of indifference to the Venetians, and the more so as their rivals enjoyed the same immunities and privileges in the Syrian harbours as they did.

All along the Provençal and Spanish coasts, the Genoese had consuls and commercial establishments in every harbour, whether Christian or Mahomedan. From Syria to the Straits of Gibraltar their vessels were everywhere well-received on the African coast. They had passed the Straits, and stood in communication with Lisbon, Flanders, and England. After the fall of Pisa, they acted as carriers for the merchants of the rising Florentine republic. To the westward the Genoese felt but little the rivalry of Venice; but new competitors in those parts entered the field. Marseilles and Barcelona, which rose on the fall of the Mahomedan Almeria (as Seville became famous as a Christian place of trade after the conquest of Grenada), extended the commerce of the East to the Iberian peninsula. In short, at no former period of history was so much commercial activity witnessed in the western world as then. The land routes from Genoa, through Switzerland, and along the Rhine to Flanders, across the Tyrol, through Augsburg and Nuremberg, into central Germany, through Aquileia and Carinthia to Vienna, Prague and Cracow, were all alive with trade. The most enlightened sovereigns, the

kings of Castile and Arragon in Spain, the Plantagenets of England, the Suabian emperors in Germany, favoured and in every way promoted the traffic that brought refinement and happiness on its wings. This was the age of the Berengiers of Provence, of Alphonso of Castile, of Frederick II. of Germany, the age of Trouvères and Troubadours, of Dante, of Simon de Montfort, of Edward I., of Robert Bruce, of Swiss independence.

In the first years of the fourteenth century the Portuguese appear as navigators. One of the first historical notices of their trade is contained in a letter given in Rymer's *Fœdera* from king Edward II. of England to Dinas king of Portugal, in which allusion is made to existing treaties of commerce. Lisbon of course was a convenient station for all trading between the Mediterranean and the German Ocean. From the Baltic, the ships of the Hans Towns came also to Lisbon. The trade carried on by the Hanseatic League extended through Russia into central Asia. The factory at Great Novgorod in Russia was even more important than those of Bergen, Bruges, or London. In the fourteenth century the exports of wine from Lisbon were estimated at 12,000 tons, which very nearly equals the quantity exported at the present day. The moderate duties then imposed on wares exported and imported sufficed to enable the kings of Portugal to amass great treasures. Thus, with the aid of the trader, civilization arose out of the darkness that covered Europe. In the trading cities manufactures sprang up, and in the adjacent districts agriculture flourished. The growth of intelligence kept pace with the spread of industry, and in the period called the Middle Ages reached the proud height on which we still look back with wonder. In this school were nursed Columbus and Vasco de Gama, who extended our sphere of activity to the Eastern and Western Indies.

It must strike every thinking person as a remarkable circumstance, that the first product which proves valuable to traders in all ages is some article of food. The Italian traders had long been the purveyors of sugar and spices to Europe from the Levant. Spices were the chief article of trade with which Lisbon supplied us after the discovery of the passage round the Cape of Good Hope; they furnished an improved mode of treating animal food. The extent to which the trade in pepper is carried on is recorded by a declaration in a chronicle of Augsburg, that the house of Welser, of that city, owned pepper to the

value of 20,000% on board a Spanish fleet that was destroyed by the Dutch in the war of independence. The reason why food is so powerful an engine is, that it releases labour from the cultivation of the soil, to be employed in other branches of production. How far the command of such vast mercantile resources favoured the extension of the power of Charles V. over one half of Europe, historians have not as yet inquired. It is however certain that the Venetians, who had long been jealous of the Spanish trade, and sought, in a very modern spirit, to repress it by high differential duties, owed the destruction of their political power to this absurd policy. It is striking that, even then, no part of Europe sympathized with the destroyed monopolists.

But the great stimulus that trade received in the fifteenth century was owing to two inventions that are scarcely less remarkable for their results than the discovery of the magnetic guide,—printing and paper-making. To these inventions we owe the power of extending associations across the barriers that political distinctions, mountain-chains, and oceans interposed between men. From a mistaken fear of this new instrument of power, its influence, like that of all progress, was at first viewed with jealousy and dread. Its enemies could not at once seize the fact, that the very circumstances which prevented political barriers from being felt as a restriction, must tend to confirm their duration. Had the policy of courts conformed to this view, and had they made the right use of the weapon thus proffered to them by the trader, there would have been as few changes in the divisions of political power, since paper became abundant, as there have been in the denominations and the size of coins.

The primary feature of the new element which paper introduced into trade, was the employment of concentrated associated capital in commerce. The great houses,—amongst which the Medici at Florence, the Fuggers and Welsers of Augsburg, and our own Sir Thomas Gresham, the founder of the Royal Exchange and of a College in London, are conspicuous,—were the levers of the great commercial enterprises that embraced the empire of Russia, North and South America, and the East and West Indies, in the reign of Queen Elizabeth. From that period, the trader, although in a great measure emancipated from the union which formerly tied his movements to the wheels of governments, in reality also emancipated the governments from their dependence upon him. The power of trade became

so much enlarged, that even political follies and vices could not destroy it. The wickedness and absurdity of courts and ministers interrupted its progress, and caused losses both to individuals and to nations. Still the share of prosperity enjoyed by Europe from trade, under all its restrictions, has ever been great since the commencement of modern history, in comparison with what nations commanded at any previous epoch.

It is to this fact that we owe the patience of the people under the numerous and conflicting economical experiments that have been tried at their expense. But the increase of population—the unfailing spur to progress—has at length broken up the schools which, on artificial foundations, pretended to create systems of restricted trade more beneficial than the humanizing intercourse which Providence has ordained to be as beneficial, when it is as free, as the light of heaven to all.

I shall not detain you with an inquiry into the merits of the various systems of “physiocrats,” “economists,” and “national protectionists.” We are now in an age about discarding all restrictions on enterprise, all narrow calculations. To this we are forced by the necessities of an accumulating population, for which these schools of economists have been found incapable of providing. But as the main impression that we have inherited from them is a dread of competition, as injurious to individual, although not so always to national interests, I have given my reasons for assuming that the competition induced by trade—that of one nation with another—is not injurious to either. To what class can the utmost competition be regarded as dangerous? To the agriculturist? We have seen that agriculture is constantly changing its character in every country,—that the gross crops of grain and fodder are banished from one soil to another, by the demand for more remunerating products from the soil that demands the most expensive cultivation,—consequently, that such a change entails no loss, where it is studied and taken advantage of. Whatever facilitates such a change must benefit both landlord and farmer, and it is upon this ground I expressed my expectation that they will lose no time in putting the agriculture of these islands into the condition of benefiting by the competition that would cheapen corn and sugar.

Can competition injure the manufacturer? His occupation offers, like agriculture, a series of divisions, each of which is benefited by the cheapening of the process that precedes it. Thus

the millowner gains by all reductions in the price of engineering : the engineer is served by improvements in mining. How is the miner served by competition ?

Besides the cheapening of all articles of consumption consequent upon the improvements that result from cheap mining, the miner has, if his trade be interfered with, the new branches of production to resort to for which demand is created by the savings of all parties. Should a miner, who has invested capital under some false system of protection, complain that he is not indemnified for his loss by the power of changing his occupation, the reply is, that it is more essential to prevent others from incurring a similar loss than to bear him harmless. Whether he has a claim on the legislative body, whose wisdom led him astray, or not, I cannot decide ; he can have no right to demand the continuance of a system which must lead others to destruction. The indemnity paid to slave-owners is a curious case in point, upon which history will sit in judgement.

But can the operative lose by competition ? If the fund created by savings, whether in manufactures or agriculture, has no other destination than to be spent in additional consumption, the demand for labour to supply the additional articles thus sought must increase the price of labour. Thus wages must rise, while their value in purchasing will be augmented. No operative therefore, who knows his own interest, will seek anything but the fullest and most general competition, for this is the grand stimulant to wages.

If competition be admitted to create wealth, instead of ruining the country that is exposed to it, we should act prudently in courting it for such objects especially as lend value to all others when they are cheapened in price. I pointed out two objects as chiefly influencing the powers of production and consumption in every country—grain and metals. Grain feeds the workman, metals furnish him with tools. We shall have reason to rejoice at the prospect of abundant supplies of both of these indispensable objects, and a reference to the map will disclose where they are to be bought on the best terms.

Besides the large quantity of rice and cocoa that can be obtained from tropical climates, and which form the most nutritive food that man can enjoy, more populous districts in Europe possess the means of supplying us largely with wheat, for which they would take our manufactured goods in return. Of these,

the most accessible are the southern provinces of Russia on the Black Sea, to which we have seen that, from the time of the Phœnicians of old, all grain-importing lands have constantly resorted. The low lands of Podolia and the Ukraine are a vast level district, which were once unquestionably submerged by the ocean, and are still saturated with salt and soda, which in the vegetable soil is a prolific source of fertility. Mr. Jacob, in his reports, has stated that grain grown in these parts can be delivered at Odessa at 14*s.* 6*d.* per quarter. From personal knowledge of a second similar district, the plain of the Theiss in Hungary, which Mr. Jacob did not visit, I firmly believe this to be the case. I copied from a farmer's books in the Banat, the estimated cost of the production of wheat, and found that it did not exceed 11*s.* per quarter. This fertile district is growing rapidly populous, and, were the communication with the sea by a railroad which was proposed in the last Hungarian Diet realized, wheat could be delivered at the Hungarian port of Fiume on the Adriatic at 15*s.* per quarter in average years. A desire to open this market for trade, that would bring us into direct contact with a population of fifteen millions of Hungarians and of Turkish subjects, led to the last treaty concluded with Austria in 1839. This treaty proved a failure, on account of a geographical error upon which it was based; for it assumed the Danube to be the outlet for Hungarian trade, whereas all the wheat of the Banat in Hungary is shipped at Fiume on the Adriatic. The error led to the awkward seizure of the only two Austrian vessels that attempted to trade under its provisions. But this untoward circumstance extended our commercial knowledge; for as the cargoes of these vessels were found, on inquiry, to be Wallachian instead of Hungarian, the fact was proclaimed in England that Wallachia could export corn as well as Hungary. As these three districts alone contain an area, available for growing wheat on the cheapest terms, of far greater extent than the British Isles, the chance of a cheap supply is improved by the prospect of its being a regular one. The climates are also different in the cycles of their seasons, and the resources of Wallachia and the adjoining provinces were first discovered in Turkey when a failure of the grain crop in southern Russia cut off the supplies from Odessa, on which Constantinople until then depended. Russia has itself two distinct climates, as was proved in 1838, when, the harvest having failed on the lands near the Upper Wolga, wheat was sent from Odessa and Dant-

zio to St. Petersburg. To these well-known resources in Europe, it is scarcely necessary to add the vast uncultivated tracts of Asia, Africa and America, in order to prove that any distress which we experience from scarcity of food is clearly the result of choice and not of necessity.

Next to supplies of food, Providence has furnished man with the most abundant supplies of iron. By a strange fatality, the aberration of reason which so often induces famine in countries that are best able to command supplies of food, constantly dooms men to inefficient labour from want of tools in countries where iron is most abundant. The erroneous notion that England is specially favoured, by abundance of iron in immediate contact with fossil coal, is fast dispelling before the spread of knowledge. In Belgium, in the districts of Aix-la-Chapelle, and of the Ruhr, on the Upper Moselle, and in Silesia in Prussia, coals are as abundant, and as cheaply raised in sufficient contiguity with iron, as in any part of England. The coal-beds on the Upper Moselle and the Saar extend into France, and furnish materials for the engineers of Alsace. The name of Keschlin of Mühlhausen, and that of Cockerill of Liege, are perhaps better known in the most remote parts of Europe than any single English firm; and when orders are in the market, it is not often that anything short of a very low price will secure them for our workshops.

But these districts, which are the best known to us, give a very small insight into the mineral wealth of the continent. The chain of the Alps, from the boundary of the Austrian empire towards Switzerland to where these mountains run out towards Hungary, is abundantly supplied with ores of all kinds. Amongst these, the iron ores of Stiria and Carinthia are prominent for the superior quality of the metal. I have seen cylinders at Vienna that were made in Carinthia for the mint of Stockholm,—assuredly a curious testimony on the part of Sweden to the superiority of the iron of another country. At Vienna a hanging bridge is constructed of this material, which weighs but two-thirds of the burden of a chain-bridge near it that was constructed in England of ordinary iron.

Entering Hungary, we find the Carpathians charged with veins and beds of metal of a similar superior quality. Amongst the names of the Austrian nobles who, as I said in my last lecture, supplied the place of manufacturers by establishing works on their own estates, I mentioned that of Prince Coburg, the uncle of the

Queen of England. This prince has iron-works on a large scale, which are managed with a skill not easy to be surpassed. They are situated on his large estates in the mountainous districts of northern Hungary; and when the communications are improved, which in that country is an easy matter, we shall probably find that we have submitted so long from mere ignorance to the monopoly which Sweden has hitherto maintained of our market. Since we have no more a monopoly of iron than we have of food, we possess no advantage over our neighbours beyond security of property and a better manufacturing organization than they now possess. In my last lecture I pointed out the danger of disturbing this organization; and if any are inclined to make light of the warning, it may be enforced by a description of the means that have been resorted to on the continent within the last five years for making these resources available.

The invention of ships, as we have seen, emancipated the seafaring countries of the world from dependence upon rich soils and fine climates: it became possible, by judicious exchanges, to procure food and other necessities on an unproductive rock at a cheaper cost than they could be produced together by either of the exchanging nations. This invention was rendered more powerful by the addition of the mariner's compass. The invention of these maritime machines transferred power from the land to the ocean. The supremacy at sea was rendered, by the art of navigation, the throne of political ascendancy. The reason why this was the case I have already explained: it was because the trader is the most powerful ally that a ruler can attach to his cause.

The invention of roads to be travelled by the agency of machinery has restored the balance that was thus disturbed. The largest continent is clearly independent of maritime aid, when it adopts this means of making its resources available, however distant they may be from each other. Of the power created by this exertion of intelligence, the map again instructs us.

In the course of the present year a railroad will be completed from Hamburg to Saxony, which branches off in one direction to Berlin, and is continued in another to Silesia: thus the Saxon manufacturers can now reach Hamburg in one day, whereas but last year the communication demanded weeks, and often months. The Silesian iron, cloth and cotton works have not this outlet alone. A second, passing along the valley of the Oder, connects them with the Baltic at Stettin. These two lines of railroad are

available for the silk manufacturers and dyers of Berlin, who derive another benefit from them. Berlin, situated in a vast sandy plain, was one of the dearest cities in Europe. Corn now can be introduced at the Dantzic prices, fish is conveyed to it from the sea, and cattle are sent from the meadows along the Elbe. Elberfeld, the great seat of the cotton manufactures on the Rhine, will soon be brought within a few hours' drive of Antwerp by the Belgian and Rhenish railroad. This line is also available for the silk-weavers of all Rhenish Prussia, and for all the manufacturers of Belgium. Of all the railroads now constructing on the continent, those projected in Austria would be of the greatest use in extending the trade of this country; and no time ought to be lost, either by the legislature in manifesting an early intention to adopt the principle of reciprocity on the most unlimited scale, or on the part of our people in demanding such a course of their representatives. It is evident that a slight difference in prices must turn the scale against us, and we cannot continue, as we have done for years, to throw away all the advantages of our position to secure petty advantages to individuals and factions.

Our rivals in trade are henceforward not to be sought in maritime states alone. Every continental power that connects itself with its neighbours by railroads is emancipated from the sea, as the maritime states were anciently from the land, by the ships with which they tracked the ocean. What are petty selfish interests in comparison with this march of intelligence? Who in this grand scheme of mutability and unfettered power, has a vested interest in any earthly possession that does not demand an exertion of intelligence to secure it? Can any man wish to substitute a dependence upon brute matter, as the true foundation of political or commercial advantages, for the rule of mind, to partake in which no other qualifications are requisite than knowledge and judgement,—those sources of intellectual power which will command the greatest material enjoyments for those who possess them?

LECTURE V.

COIN—CURRENCY—CREDIT.

IN treating of trade I confined my remarks to those times when commerce was an actual barter of commodities. The devices for facilitating exchanges, which in modern times have very much enlarged the trader's sphere of action, cause him not unfrequently to lose sight of this foundation of traffic, which still is barter however unconsciously it may be accomplished, and to attach an undue importance to money, which serves as a medium of exchanges.

The history of money will require us to apply the principles upon which successful industry, or the accumulation of wealth, is founded. These have been shown to consist of the most effective methods of employing the power of man, that is to say, his reasoning faculties.

In agriculture, trade and manufactures, we have seen that men possess the faculty of multiplying the power of individuals by association. The source of all power is however individual in its origin. It is as thinking beings alone that all men can assert their equality. The ultimate aim of all rational association is therefore to allow the greatest scope of individual liberty to the members associated. A sound monetary system is one of the most powerful means that a community can employ to attain this end. Trade associates the capital possessed by every country that follows it, for the common benefit; and like every other association, produces greater or less results according to the freedom with which associated nations or individuals wield their resources.

Money was invented to represent productions of industry and property of all kinds that could not be transported, or which it was not advisable to transport in order to effect commercial exchanges. Even metallic coin is intended to be put to this use. One description of wares is exchanged for money, which money the receiver intends again to exchange for something else that he wants. Coins are consequently useful in proportion to the

number of places or countries in which they are accepted as payment for goods sold. By this is meant, that the person who takes coins as payment expects to find them taken by other parties for goods that he wishes to obtain. The value of a coin depends, therefore, upon its representing as accurately as possible the relation of the value of the object sold for it to the value of objects which the seller wishes to obtain at home, or elsewhere. If a pound of meat be worth in the market four pounds of meal, the seller of a pound of meat expects the coin given him in payment to be taken by the mealman in exchange for four pounds of meal. Should meat become abundant, it might sell for a coin that would only purchase three pounds of meal. But meat might grow scarce, and sell for a coin that would purchase six pounds of meal. The use of the coin to the trader lies in its expressing this ratio of value as constantly as possible, and in the greatest possible number of places. Metallic coin can only render the trader this service, when it is not so abundant as to fluctuate much in its intrinsic value. For this reason the cheaper metals, iron, copper and bronze, are not so well adapted to be extensively circulated as a medium of trade as gold and silver.

Among the products of the earth which have been everywhere the most keenly sought, the precious metals unite too many valuable qualities not to have become at an early period a chief object of trade. In addition to their lustre, when worked into ornaments or utensils, the possibility of dividing and reuniting the parts without loss,—the invariable quality of the refined metals, and their power of resisting the action of the elements,—recommended them as invaluable aids to the trader. In fact they possessed so many recommendations to a rude age, that the various modes in which they were serviceable have rarely been distinctly appreciated.

The great value of a small quantity of gold and silver, compared with other commodities, made it early desirable for the trader to be satisfied respecting the purity of the metal. This probably first led to the practice of coining, as may be inferred from the fact that the oldest coins are those most free from alloy. But the affixing of an impression as a guarantee of authenticity to many things is of older date than the recorded origin of coinage. That the seal-rings which we meet at so early a period in history were used as a medium of exchange, or as money for pledges, or even for purchases, is highly probable. We have an

instance of the practice in Genesis (xxxviii. 18), where a ring and a bracelet are given as a pledge; and the custom of giving a ring on betrothal has been traced to the same source. But that the impression of a peculiar seal conferred the sanction of authenticity upon official documents is substantiated by innumerable instances in the history of the earliest times, and certainly by some when there is reason to doubt whether coined metal was used in traffic. The fact that a stamp upon coin would not have conveyed any idea of security to the trader, if he had not been accustomed to regard the impression of a signet with some veneration, may be thought conclusive evidence that the custom of sealing prevailed before that of coining. That the guarantee of an official stamp was necessary to make the precious metals serviceable as a medium of exchange, argues a defect in their nature which demanded a remedy. This defect is more obvious in gold than in silver, the former being one of the least adhesive of metals, and suffering easily in bulk from attrition.

It therefore appears probable that coinage was first resorted to as a guarantee of the fineness of the metal, which could not so easily be tested as the weight. But the history of coinage does not go so far back in any country as that of other arts. We have no coined metal from the age of the cave-temples of India and Egypt, of the date of Memnon, or even of the Assyrian empire; and yet the early and frequent mention of gold and silver as common articles of trade is corroborated by concurrent testimony from various sides.

The earliest authentic accounts of trade show a disposition on the part of nations to associate for acquiring a common circulating medium. When the Greeks had, by their naval skill, raised a power in the Levant which could measure its strength with that of the Persian monarchy, the coinage became a political arm. At an early period of the history of Greece we find the same silver standard used in Egina, in Persia and in Phoenicia: it was afterwards adopted by the Athenians, and subsequently by the Macedonians. The Greek gold stater had been coined on the same footing with the Persian daric: its weight was that of the didrachma, and it passed current at a value of 20 drachmas, or about a louis-d'or of France. There can be little doubt that the assimilation of the coinage was of great use to Alexander, and served to disarm opposition in that important class in the East,

the traders. From the accounts given of the hoarded treasures in the palaces of the Persian monarchs, it is not difficult to infer the causes of the fall of the dynasty of Hystaspes. The sums levied as tribute from the provinces were withdrawn from circulation, and the government grew constantly more feeble as its officers increased in rapacity. What the Macedonian conqueror squandered in his short hour of triumph must have been an inestimable boon to the impoverished trader. According to Strabo an immense sum was released from the royal treasuries at Susa and Ecbatana, which, employed in trade, returned the enormous revenues we read of in the histories of Alexander's successors. While there appeared no alternative but to use the precious metals, the value of gold and silver was immeasurable to the trader, and the task of government was limited to regulating the coin, so as to excite confidence in its stamp. The reputation of the Greeks amongst neighbouring lands rested mainly upon the invariability of the tetradrachm, which then passed current in the Levant and the adjacent countries, as the Spanish dollar did afterwards between the trading nations of two hemispheres.

Brass and iron coins, frequently mentioned by ancient writers, being generally struck much above their value, only circulated in the particular states where they were issued. But the use of an exclusively local coin suggested, even at an early period, a number of amusing experiments relative to circulation: thus the city of Clazomenæ on one occasion bought gold and silver of its own citizens for iron money, in order to defray the charge of some mercenary troops: the iron coin circulated at home for its nominal value, thus resembling in some measure the paper-money of modern times; but the old writer adds that, for the purposes of foreign trade, the Clazomenians were obliged to use their remaining gold and silver*.

As trade increases the demand for coin becomes urgent, and induces governments to debase their standard. But the Athenians depended for existence as well as power upon trade, and their coinage shows fewer depreciations than that of any other country. From the time of Solon to Philip of Macedon it does not seem to have been tampered with. Under the successors of Alexander the coinage appears to have fallen into great neglect.

* This is not the only occasion when the ancients drew the nice distinction between intrinsic value and usefulness as a circulating medium, even in metallic currency: see Arist. *Ethic.* cited by Eckhel.

Probably the increase in the precious metals did not keep pace with the growing demands of trade and with the increasing capacity of the sovereigns.

The denarius, which in the Roman coinage corresponds with the Greek drachma, was unquestionably not a value taken at hazard by Servius Tullius. Modern authorities differ as to the exact weight of this coin; Boeckh, on the authority of Barthelmy, makes it much lighter than the drachma, while Letronne assumes that its value was very nearly that of the drachma, since eighty-four were coined out of a pound of silver.

However this be, there is no contradicting the fact, that during the flourishing period of the republic the silver coin remained undebased. But the fall of the republic and the annals of the emperors commence with, and are diversified by, changes in the value of the currency. Between the reign of Augustus (whose money, both in weight and in fineness, differed little from that of the republic,) and the accession of Septimius Severus, the weight of the denarius had indeed varied but $\frac{2}{3}$, but the fineness had been reduced from $\frac{5}{8}$ to $\frac{3}{8}$. The succeeding tumultuary periods show rapid and fraudulent variations in the value of the coinage, until the last silver denarius under Posthumus, which had in weight but $\frac{4}{8}$ of that of Augustus, while the proportion of fine silver contained in it was but $\frac{1}{8}$. Probus coined the first brass denarius, which contained $\frac{9}{16}$ of fine silver. In the same manner Letronne shows that the gold "aureus" was depreciated by alloy and diminution of weight. The aureus of Julius Cæsar weighed 154 grains, that of Vespasian only 137·4.

While we must term the frequent tampering with the coinage by the emperors fraudulent, we do not mean to assert that the depreciation of a metallic currency is not often the result of sad necessity. The supply of the precious metals can scarcely keep pace with the growth of trade: consequently the increased demand for a circulating medium, which must be satisfied, leaves a government no alternative. The history of every country tells the same tale; and although in some, as in Greece and Rome, long periods of time may elapse before the crisis breaks out, yet it must eventually come, sooner or later. It is possible that a government, conscious of the working of the principles of currency, might persuade the people to submit to the loss accruing from a depreciation; but it would require both more knowledge

and more skill than are commonly displayed to ensure success to the attempt. Where changes are effected without the urgent pressure of trading necessity, for the benefit of individuals or of a party, the attempt can only be stigmatized as fraudulent and reckless,—as one entailing upon its author the whole responsibility of the misery and bloodshed it may occasion.

We may trace through the whole of modern history two characteristic features of a metallic currency which are noted in antiquity. The insufficiency of the supply of the precious metals to meet the growing demands of trade has in most countries subjected the coinage to rapid and repeated depreciations, which invariably mark epochs of internal discontent, in the countries suffering from their operation. The endeavour on the part of many nations to assimilate their coins, for the purpose of facilitating trade, has had as large but as unsuspected a share in conferring political supremacy in modern as in ancient times. The inconvenience arising from the hoarding of large quantities of bullion has been less felt, although to a certain extent it may still be traced by its political effects in some countries.

The gold sol of the early French coinage was unquestionably an imitation of the “solidus,” into which Constantine had modified the aureus, and which exchanged for thirty reduced denarii. The fact that the sol d’or was made to exchange for twenty-four deniers, makes it probable that the high standard of coin was preserved in the provinces that paid the imperial tribute, after it had been departed from in the capital. Whatever was the reason for preserving the analogy, the old French denier, to which the modern franc has succeeded, is the legitimate representative of the Roman denarius, and consequently of the Greek drachma. The coins that have had the greatest circulation in modern times have all been multiples of the unity thus obtained, and remarkable indeed is the tenacity with which the trading world has adhered to this quantity, so often lost amidst the confusion of the multifarious coins of Europe.

A marked distinction, however, was preserved between the northern and southern parts of our quarter of the globe, by the difference in the money standards adopted in the two. In France we have seen that the coinage was framed upon the Roman precedent. The fact that the Anglo-Saxon immigrants brought an independent standard with them into England, differing from that of the Romans, might lead us to infer that commercial trans-

actions demanding the mediation of money were early known to the nations on the Baltic. The pound of those times, which was afterwards called Tower weight, has been found to agree with the weight of Cologne, whose "mark" is the standard for all countries lying to the eastward of the Rhine. The Tower or mark weight was abolished by the Plantagenets, and the Troy weight substituted.

The depreciation of the coin plays as conspicuous a part in modern as in ancient history. The coinage in 1353, the 27th of Edward III., reduced the gold noble (called the "rose noble," from the rose which formed the shield on the reverse) from 138 $\frac{1}{2}$ to 120 grains in weight. The distress and dissatisfaction amongst the commons which followed, were evinced in the insurrections that broke out at the commencement of the reign of Richard II. in London and elsewhere. Yet the new standard was maintained unaltered, until the wars of the fifth and sixth Henries reduced the crown treasury so much that the noble was issued throughout both reigns at the weight of 108 grains. Edward IV. restored the former size of the noble, but raised its current value from 6*s.* 8*d.* to 8*s.* 4*d.*, which was a still greater reduction than the former. On Henry's restoration the unpopular noble was abandoned, and the gold angel, weighing but 80 grains troy, and passing for 6*s.* 8*d.*, was substituted. It is remarkable that the coinage of 18th Henry VIII. in 1527 reduced the angel to 73·6 grains, and throughout the whole of that monarch's reign the coin was recklessly tampered with. At Henry's last coinage in 1545, not only was the angel continued at eight shillings, as he had fixed it in 1544, but the assay of the gold, which in the latter year had been lowered from 23 to 22 carats, was further reduced to 20 carats. A coinage of Edward VI. continued the same standard for the gold coin. The noble, or real, continued in circulation, however, probably for the convenience of foreign trade: the last were struck by Philip and Mary.

Among the striking events of this turbulent period of our history, no occurrence is so astonishing as that the Catholic religion, after being abolished, should again have been tolerated in England, especially under the aggravating cruelties that accompanied its restoration by Mary. The sole act recorded of that queen which was likely to prove popular was the temporary restoration of the coin to its old standard. She had angels coined of 23 carats in fineness, and passed them current at the old value

of 6*s.* 8*d.* The energy of the reformers is however demonstrated under Elizabeth, who stood her ground, although obliged to raise the current value of the angel to ten shillings, and afterwards to lower its weight from 80 to $78\frac{6}{7}$ grains. All her coins are but of 22 carats in fineness. Under James I. the most unwarrantable depreciation of the current coin took place: his first coinage in 1605 reduced the angel to $71\frac{5}{8}$ grains: in the last coinage of his reign it was struck at the weight of only $64\frac{1}{3}$ grains. This weight was adopted by Charles I., who however reduced the current value, which James had raised to eleven shillings, to ten. Thus were the civil wars ushered in.

It is not difficult to see why a depreciation of the coin excites such deep and dangerous discontent, and why it inevitably lends power to factious disturbers, to whose patriotism or talent is ascribed the success of enterprizes, which would often have ended in defeat and disgrace if they had not been unexpectedly supported by the excited feelings of the populace. The chief effect produced by a depreciation of the current coin is the unsettling of contracts. Even in an age when much was paid in kind this occasioned great distress, and the more so in a commercial country, that the depreciated coin in the general marts of trade was only taken at its real value. For this reason too it could only answer the momentary exigency of the sovereign at home. If he had foreign wars to carry on, he was no better off than before, because in all foreign markets the reduced coin had fallen in value. The depreciation, therefore, almost invariably made an addition to the nominal taxation necessary, by which even those were reached who might have been screened from the loss that commonly ensued from the former measure. In nearly every other country in Europe the same lesson may be read from the alterations in the monetary standard *, but it would lead us too far to follow them here.

There is little doubt that similar depreciations would, from time to time, have become inevitable under the most consci-

* Mr. Tooke recognizes the necessity of new settlements of the coinage when the quantities of gold disposable fluctuate in relation to the supply of silver. He says (p. 152 of the edit. of 1826):—"If, however, neither actual nor prospective degradation as compared with a gold standard be the object of the present plan, there must be a periodical, and perhaps a frequent re-adjustment of the proportions, according to the varying proportions in the market; and it is difficult to conceive how any mode can be adopted which shall not be liable to great practical inconveniences." We do not see why an increased demand should not also make an adjustment necessary.

entious sovereigns, for the reason before assigned, that the increase of the quantity of the precious metals in circulation did not keep pace with the demands of trade. But in such case the endeavours of a good sovereign to establish tranquillity within the kingdom, and to maintain peace abroad, would have softened each crisis. The reign of Elizabeth affords the strongest evidence of the truth of this assumption. The endeavours of the Reformers to diffuse intelligence, and the wisdom of her measures, caused the profits of trade to absorb the loss occasioned by the depreciation to which she was compelled. The voyages of Drake, the foundation of Gresham College, the embassies to Muscovy and her defence of Dutch independence, are monuments of the penetration and tact of her counsellors, and contrast strongly with the impotent self-sufficiency and pedantry of her successor and his favourites. Under James I. one-pound pieces were coined weighing $154\frac{2}{3}\frac{6}{1}$ grains, which like the angel he finally reduced in weight to $140\frac{2}{4}\frac{0}{1}$ grains. Charles II. struck guineas weighing $129\frac{1}{8}\frac{2}{9}$ grains, of 22 carats fineness, at which standard the gold coin remained. The shilling remained unaltered at $92\frac{3}{4}$ grains, from the reign of Elizabeth to that of George III. In order to detect the reason why so long a time could elapse without an alteration in the standard of money, we must recur once more to an earlier period.

The coin best suited to overland trade is gold, since a great value can be conveyed in a small compass. For this reason gold was so much prized in the earliest times, and its abundance, as we have seen, was commensurate with the demands of the early trader. Silver seems to be the companion of navigation. The substitution of a machine for animal power obviated one of the great difficulties of trade, and bulk became a secondary consideration. Whilst gold continued to be the standard, power remained constant to the continents; with a silver medium, sway migrated to the maritime states. It is more probable that the command of gold facilitated the conquests of Alexander in the East, than that it would have enabled him to overrun Italy, as he once meditated.

For distant trade silver is preferable to gold, where its bulk forms no objection to its use; for as long as a silver coin preserves something like its original size it will pass current with ease, because an accidental deviation from the standard is of less importance than in a gold coin. The tetradrachm of Athens was

probably as widely circulated in the south of Europe as the darics of the Persian kings were in Asia; and it is interesting to see that the Roman aureus spread so far into the East as an anecdote recorded by Pliny warrants us in believing; while the continuation of the silver denarius, in the French denier, attests the superiority of a silver medium for Europe.

The revival of trade in modern Europe was aided by scientific views of the relative values of coins which first appeared in the South. The names of Italians appear early as keepers of the Mint in England. In 1270 Bartolomeo di Costello is named, and in 1359 Guy or Guido di Castilon is mentioned as keeper of the king's exchanges. In 1508 Pietro Corsi, who is described as a Florentine merchant, had the management of the "Cambii," "Escambii," and "Recambii" of the king of England; for the difficulties attending a complex system of metallic currency were not at that time deemed undeserving the royal attention. We would not willingly suggest that the supposed gains of the Jews, the first cambists that history notices, induced the crown to devise the means of turning these difficulties to its own account. Indeed the fact that foreigners were so frequently found in this post, would lead to the inference that the English felt their inferiority in these matters to the southerners. But the office clearly assumed its due importance when it was managed by a man of the talent of Cecil, who held it in Elizabeth's reign.

The desire to escape from the intricacies of computation in this subtle field, and probably the experience of the encouragement which such an alleviation proved to trade, induced, as we have seen, the trading nations of antiquity to assimilate their coinage as much as possible. Together with the revival of letters in Europe, which marks a striking epoch in the history of trade, a curious illustration of the same tendency is recorded, in the imitations that we find in different countries of the coins of other lands. The English rose-noble,—so called from an indented ridge somewhat resembling the figure of a rose, drawn round the reverse within the surrounding legend,—was palpably imitated in several continental coinages. Thus the noble of our Henries was exactly reproduced in the Low Countries, where a noble of Philip of Burgundy was found with the same device and the legend, "*Jesus autem transiens per medium illorum ibat.*" The weight of both coins was the same. The counts of Holland, king Philip of France, and the city of Lübeck have left

coins of equal value of the same period. The Austrian half-real was of the same weight as the noble. With a very slight difference in weight, we find at an earlier period the larger gold coins of Ferdinand of Sicily, the Austrian real of Maximilian, the crusado of Emanuel of Portugal, with the ambitious legend "Persie Indie Ethiopie Arabie cnc Guinee," and a Hamburg dollar with the humbler motto, "Nach Portugalis schrot und norm."

The Agnus Dei, golden rider of Brabant, and the ducat which at a later period so long served as the current gold coin on the continent, were nearly equal in value, and were half of the noble. These coins were destined for circulation in the interior of Europe, that is to say, in the overland trade of those times.

Nearly all tropical and transatlantic business is still carried on in the currency which has prevailed since the sixteenth century amongst the maritime states of the Mediterranean. The Spanish dollar, which is equivalent to about 5 francs, or 4*s.* 3*d.* sterling, and weighs 17·8 grains, is the standard for the dollars of Switzerland, Rome, Naples, Holland, the United States, and the old crown-dollar still met with in southern Germany. The mark of Lübeck and Hamburg is about one-third part of this coin. As the franc assimilates nearly to this standard, of which it forms one-fifth, and Greece has revived her ancient drachma, England, Austria and the states of the Germanic Confederation are the only dissidents from a general medium of exchange, which popular usage has widely sanctioned. But England was long dissentient only at home: the currency of her Colonies she for a long time never attempted to control. In India the rupee is even now sold at a fluctuating market-price, like ingots.

The various shifts to which the inhabitants of the West India islands have resorted are well known. Every island has its own currency, English names being used to designate money of account of the strangest values. Thus while at Jamaica the pound sterling is sometimes equal to thirty shillings currency or more, the same name designates in the Leeward islands a value of forty shillings. The Spanish dollar is there taken at the nominal value of nine shillings; but, for the convenience of local circulation, a coin is cut out of the centre of the Spanish dollar, equal in value to one-twelfth of the original coin. These *bits* are stamped by the local government and pass current under its sanction: eleven made originally a cut dollar, and twelve a

round dollar or piastre, the common coin of the Western hemisphere and the Chinese seas. In the Windward islands the pound sterling disappears in a local currency, of which 235*l.* is equal to 100*l.* British. Mauritius again has its separate currency. Guiana reckons in guilders, and the Boors at the Cape of Good Hope reckon in their local rix-dollars.

We can here trace throughout the growing demands for trade conflicting with an insufficient supply and inconvenient adaptations of the precious metals. It is true that means of remedying these evils were known and were practised by the great trading cities and trading houses of the middle ages. But the governments did not appreciate these means, and wars continued to render trade insecure, and consequently metallic money indispensable. Hence when the stocks of gold and silver discovered in the new world were poured into Europe, they were able to assert the power of controlling trade. On this one occasion we have an historical instance of their abundance displacing the standard of value so as to depreciate these metals in public estimation. The price of all articles rose relatively to gold and silver between 1560 and 1640, a fact that has been much commented upon by economists.

I am however not aware that any writer has pointed out why no repetition of the fall occurred at subsequent periods, when much larger importations of those metals took place. And yet it cannot be denied that some great lever intervened between 1640 and the present time which has kept prices relatively stationary, even including the precious metals. The quantities imported between 1570 and 1670 must have far exceeded the production of the preceding century; yet no second change of prices, to the extent said to have taken place about 1560, is pointed out.

Baron von Humboldt estimates the production of the silver mines of Peru to have averaged annually, between 1776 and 1785, about 297,936 marks; between 1786 and 1820, 435,129 marks. Between 1821 and 1833 the average yield of Peru sank to 249,092 marks; but in 1833 the yield had again risen to 339,430 marks. The production of Chili averaged, from 1790 to 1809, about 1900 marks of gold and 33,300 marks of silver. From 1810 to 1829, it was 4200 marks of gold and 31,000 marks of silver. Pöppig and Meyen estimate, for 1832, about 7350 marks of gold and 130,000 marks of silver. Bolivia, or

the republic of Buenos Ayres, which contains the famous mines of Potosi, produced, between 1624 and 1634, annually, 615,480 marks; but the production declined between 1779 and 1789 to 432,510 marks annually. Between 1790 and 1800 these mines yielded 4000 marks of gold and 662,800 marks of silver; from 1810 to 1829, 4970 marks of gold and 290,290 marks of silver. For 1835 the production was estimated at 5000 marks of gold and 300,000 of silver.

If we may believe the reports concerning Brazil, there has been an enormous decline in the production of the gold mines of Minas, which yielded at some periods of the last century 53,330 marks annually, but now are supposed not to exceed 1500 marks. On the other hand, the United States now produce, in North and South Carolina, Virginia, Georgia, Tennessee and Alabama, between 6000 and 8000 marks; and the Mexican mines, with great fluctuations (between 1806 and 1810, 9383 marks of gold and 2,155,927 of silver; in 1835, 3965 marks of gold and 1,926,940 of silver), are probably now not much less productive than they were on an average of the latter half of the last century. The two last-named American gold districts, with the Russian works in the Ural Mountains, are additions to the gold-producing districts in the middle of the last century, and in some measure compensate the loss said to have taken place in Brazil, supposing it to be correctly stated. The average production of the precious metals has therefore increased progressively since 1640, but without occasioning any reduction in their market-price.

Mr. Jacob has given an estimate of the quantity of gold and silver in Europe about the year 1829. As the South American States between 1810 and 1829 had revolted, and the mining was in consequence partially interrupted, that gentleman assumed a considerable diminution in the mass of the precious metals between 1810 and 1829. M. Berghaus continues the calculation down to 1835, and shows that, the mines having grown more productive since European capital was applied to work them, the mass of gold and silver was in 1835 nearly equal to its amount in 1810.

The history of these metals gives, therefore, the following results. The greatest deviation in the production of any two years during the last two centuries amounts to about 5,000,000*l*. By accumulation, however, the sum we possess in Europe varied

from 136,000,000*l.* in 1600 to 297,000,000*l.* in 1700, and to 380,000,000*l.* in 1835, being an excess of 161,000,000*l.* in the former, and 83,000,000*l.* in the latter period.

Of late the gold washings of Russia have become considerable. In the year 1846, the quantity of gold delivered at the mint of St. Petersburg, on private account as well as on account of the crown, amounted to 1722 puds 29 lbs. 87 solotnik, which, at 3*l.* 17*s.* 10½*d.*, exceeds 3,000,000*l.* The washings were originally in the circles of Jekaterinoslaw, Beresow, Kolumanowoskresensk and Nertschinsk, and produced but 34 to 40 puds per annum. In 1819 the gold deposits of the Ural Mountains were discovered, and the quantity obtained increased rapidly* to the value of 3,414,427*l.* in 1846. The total addition to our stock of bullion in Europe from this source amounts to 18,761,310*l.* within ten years. And yet prices have shown no fluctuations that could be traced to such a cause, although the proportion threatens us with an accumulation of some hundreds of millions by the close of the century. And yet these annual additions to our coin, even joined to the increasing use of paper-money, have caused no such perturbations of value as that noted in 1570.

The solution that I would offer of the problem here started is, that the operation of credit, favoured by the inventions of paper and printing, came to be better understood during this interval; that consequently the absolute standard of value which had hitherto been adhered to as well as was practicable, in the precious metals, was abandoned gradually, and another substituted for it which had a tendency to steady prices, by causing the precious metals to drop into their place as an article of trade, whose value rose or fell by the general rule of demand and supply.

From this rapid and imperfect historical survey of a subject that is highly attractive both to the historian and lover of the arts, we may deduce three important conclusions.

In the first place, the possession of something that represented a general standard of absolute value was an invaluable boon to the trader in barbarous times.

Secondly, that under certain circumstances, the precious metals answered this purpose for a time, but that their insufficient supply, as proportioned to the growth of trade, led to serious evils. Although assuredly not the primary cause, yet the appa-

* See Table in Appendix.

rent insufficiency of the circulating medium has in no small part often contributed to the demoralization of society and ultimately to the fall of empires.

Thirdly, it early appeared from various experiments, some of which have been named, that the intrinsic value of a coin was only essential when it was used as a current medium in foreign and insecure trade. In domestic and safe transactions the coin can be assumed to have the value of some article that it is exchanged for, and consequently to express the relative value of that object to all others in the market. On further circulation it ultimately expresses the relative values of all objects towards each other. Provided therefore such a coin originally cost little or nothing, like the iron coin of the Clazomenæ, there was no loss when in circulating it returned to the first issuer in full value, although he could do nothing with it afterwards. Such a coin could have but a very limited circulation; and even brass coins are always found in circumscribed districts round their ancient centre of issue.

But a high degree of intelligence must pervade the population of a whole state which adopts this expedient, if it is to be successful, and we must suppose the patriotic feeling in those states of which the earliest attempts are recorded to have been a kind of inspiration. The enthusiasm of the moment must have supplied the place of the higher qualities of morality and judgment which are required to render the substitution of a token marking relative values for the coin which expresses the absolute value of what it is exchanged for practicable. This change is one denoting great progress, and constitutes indeed the transition from barter to what is properly denominated trade.

You perceive, gentlemen, that this change, so important from the progress of civilization, rests upon the substitution of a standard of *relative* value which the trader adopts in the place of a standard of *absolute* value, which is necessary in barter. With the recognition of this truth, the various problems which have been started respecting the proper nature of a current medium receive a prompt solution. The standard of relative value is an ideal standard, but is more easily found than the long-sought standard of absolute value, which in its Proteus-like shapes of the precious metals, coin, labour, or whatever economical research endeavoured to establish, always slipped through the fingers of those who thought they held it fastest.

Let us now follow the course of unconscious intellectual progress until the world arrived at some perception of the truth that intelligent traders could dispense with coins.

Wherever trade attained any degree of perfection, the practice of reckoning by money of account prevailed. In Greece, the coin in circulation was commonly the tetradrachm. Accounts were however kept and calculations made in drachms. The Romans, whose coin was the denarius, counted in sestertii. That the early Italian traders of modern Europe were familiar with this manner of reckoning cannot be doubted; for it becomes indispensable, where coins of many kinds have to be dealt with. The transition from the slavish use of coin to reckoning by account is a sign of great progress. It is the second step of intellectual progress in the use of money.

In more modern times the mercantile world has constantly used a different standard of value from the coin of the realm, and, like the trading companies before named, those cities are the greatest marts of trade where calculation allows the dealer to dispense with coin. Hamburg, Lubeck, Bremen, have all their current and their *banco* money. At Frankfort and Augsburg a bank currency is used in exchanges that differs from the current standard. The pound in England was indisputably a money of account as long as guineas were a legal tender; and the accident that the gold coin which succeeded to the guinea was not named a pound, has saved us from many difficulties in the interpretations of contracts that must ensue upon the identification of the unit of account with the unit of circulation. By what means they have hitherto been avoided will become apparent when we have proceeded somewhat further in our inquiry.

A large portion of the trade of the world is carried on through symbols of value, that have little or no intrinsic worth, but which form very useful tokens each in its peculiar locality. Such symbols are the cowries or shells used in the East Indian archipelago, and the martin's paws used in part of Siberia and Tartary. Even the brick tea, which is the currency token throughout all central Asia, consisting of a lump composed of fat and tea-leaves compressed into a cubical shape, partakes of the character of a token: although it undoubtedly possesses intrinsic value as an article of consumption. But the most refined mode of effecting commercial barter is through the medium of bills of exchange,

to which I do not anticipate that any intrinsic value will be attributed by any party.

The rise of civilization out of the gloom of the dark ages was marked by striking phenomena in the history of trade and currency. From the secret credit system founded by the Jews, whose association, although it had a religious tie, yet enabled their direst foes to carry on some trade, we can trace a chain of progress to the assumption by governments of the direction of trade. Venice, Genoa and Pisa founded colonies, whence they drew the produce of corn-growing lands, and bartered this produce in the Levant for the productions of Asia and Africa. The flag of the government alone ensured the safety essential to the success of these venturers, while the resources of the state and the dependent position of the colonists allowed the trade to be carried on with little specie. A similar arrangement for (unconsciously) economising money lay at the bottom of the great trading associations of the Hanse Towns. Their establishments at Lisbon, London, Bergen and Novgorod corresponded with each other, and their books answered the purpose of credit accounts. The successes of these various endeavours caused trade to be respected, and the progress of this feeling at length allowed individuals to attempt the same speculations. In due historical succession we consequently find the great commercial houses of the close of the middle ages, the Medici of Florence, the Fuggers and Welsers of Augsburg, our own Sir Thomas Gresham, and other names familiar to the historian. This emancipation of individual exertion is what forms the real transition to modern history, in which freed intelligence has had to show itself a power superior to the rude contrivances of caste, privilege, or governmental array, and thus to prove to the world that in associations which admit of the greatest extent of individual liberty is the only firm and durable form of union. It was however assuredly not by proclaiming slavish dependence upon any monetary scheme that this blessing was obtained, nor can it be perpetuated by the renewal of any undue subjection to coin or any other monetary idol.

Calculation, as we have seen, led to the gradual disuse of any third object intervening as a standard of absolute value between two things that it was desirable to exchange. The fashion of confiding a commodity to a buyer, when he wanted it on the condition of his furnishing the means of procuring another

wherewith to pay for it when required by the seller, is an invention of modern times ; such bargains are called transactions of "credit."

In a sale on credit, the goods parted with are valued according to their relative value to other objects expressed in money of account. The buyer promises to find, at a fixed period, a credit somewhere that shall be available for the seller, like coin, for the purchase of anything that he may require. This can only be effected on a large scale when the mart is general enough to present all kinds of commodities : for if the credit offered be not of a kind that will allow the seller to use it as purchase-money, the value must be supplied in coin, or in something equally transferable. Experience has shown however that trade arranges itself gradually in such a manner as to furnish credits that mutually cancel each other. I proceed to show how this is done.

Credit is made available as a medium of exchange in three shapes, by cheques, bills and notes.

Cheques are orders payable on demand, drawn upon a banker by parties who have deposited money or credits in his bank. Deposit accounts have for many years been kept by London bankers free of expense to the parties. The use of the money, or of the credits, deposited, forms the profit accruing to the banker, and the depositor has the convenience of safe keeping for his money, and of drawing cheques instead of paying every sum in coin. Cheques, being written memorials, serve as receipts, and afford a useful means of detecting errors. A mode of securing cheques, which are payable to bearer, has been adopted in London, which consists in writing the name of the banker of the party who is to receive the sum across the middle of the cheque. When this is done, the banker drawn upon pays it only to the banker whose name is written across, and the payment of the cheque, if lost, can easily be stopped. Country banks and foreign banks usually allow interest on deposits, and charge a commission for the business transacted.

Bills of exchange are orders to pay money after a certain lapse of time. Short bills are drawn at three days', seven days', or ten days' sight, that is to say, after presentation for acceptance. Usual bills are at one, two, or three months after date, or after sight. In England three days, called days of grace, are added to the term specified in the bill. In other countries the number of the days of grace varies. In some places as many as ten days, in

others no days of grace, are taken. The acceptance of a bill is declared by the party drawn on, when he writes his name across the front of the bill. This serves as an acknowledgment that he is indebted to the party drawing the sum specified. If the drawer passes the bill to a third party, he must either draw the bill in favour of that party, or, if he has drawn to order, must write his name across the back of the bill. This is called *indorsing*, and it is usual for all who take and pass a bill of exchange to indorse the same. The acceptor of a bill cannot refuse to pay it, when duly presented by an indorser, on the plea of his not being indebted to the drawer: but if the bill be in the drawer's hands, he can raise this plea and refuse payment. The holder of a bill, the payment of which is refused on due presentation, can demand the sum of any indorser whose name stands upon it; and if that indorser be not able to liquidate the demand, can proceed against all the others until he is indemnified. The usual origin of a bill of exchange is a transfer of goods of some kind. The bill is therefore a voucher for the existence of property. On parting with the property for which he has accepted a bill, the owner can draw upon the new purchaser, although the first bill (his acceptance) be not paid. The same goods may be drawn against twenty times in a week, supposing only that every bill represents a fresh transfer of the goods. A bill that is not drawn against goods that are parted with, or against property of some kind, is "a kite" not representing any real value.

The number of bills in circulation stands in a certain relation to the commercial transactions going on; but in no necessary proportion to the value of the goods transferred; and this forms the real source of danger in the use of credit. To make it apparent, let us suppose 100 quarters of wheat sold to a corn-merchant at 60s. per quarter. The seller of course draws a bill for 300*l.* at the date agreed upon. Let this be three months. If much speculation was going on, this lot of grain might be re-sold every market-day within the interval, and thirty-nine or more bills might be drawn against it before the first became due. These thirty-nine bills are a creation of credit beyond the original sum invested to the extent of thirty-nine fold. Yet each new bill only cancels ultimately the previous acceptance of the drawer. Each bill saves the inconvenience of an advance to each successive purchaser; for if his acceptance did not pass in

the market, he would of course have to pay for the object purchased in cash. As Mr. Senior says, his credit serves him in lieu of money.

No direct limitation upon the power, which a man possessing credit can exert, is practicable without destroying the useful source of national wealth, which credit presents. But two indirect checks accompany the use of credit, and suffice, as experience shows, to prevent the abuse of this power. Although, as in the extreme case assumed above, all the corn, nay all the sugar or other stocks in the country, can be sold every market-day, or oftener, and a bill drawn for the goods transferred; yet the man who values his credit is bound to take care not to expose it to loss. On the other hand, the man who takes a bill, giving value for it, is equally bound to know that it is the result of a fair transaction and is likely to be paid. He becomes, while it is running, a partner in that transaction, and incurs the responsibility of having to make good any loss that the dishonesty or folly of drawer or acceptor may occasion. That these two indirect checks are sufficient, rests upon historical proof. The goods current in trade are not commonly sold for the purpose of drawing a series of successive bills upon them. The practical result is, that the large stocks of wares are in the hands of men who are too wise to enter into such schemes, and these stocks do *not* remain in the power of those who would be wicked or silly enough to try them. No man indeed can enjoy mercantile credit, until it is known that he is too well aware of the consequences to venture to abuse it. His simple signature, when he enjoys this character, is taken as a voucher for the existence of value somewhere, and for its realization by fair means.

Credit is therefore, amongst mercantile men, a personal qualification, resting upon the character of the party claiming it, no less than on the actual conviction that he possesses goods against which he draws or accepts bills. But the knowledge of any man's character is necessarily confined to the limited circle of his acquaintances, and credit cannot be safely given by parties residing at a distance. Hence the utility of local banks in every trading community, whose credit serves to guarantee that of the trader in the central and all other distant markets. Private banks are better qualified to strengthen credit than branches of a central bank, inasmuch as more caution may be expected from a principal, who stakes his own fortune upon his guarantee,

than from a paid official, who is not so deeply interested in the recommendation which he gives.

There is an extraneous control upon personal credit to be derived from the law of value, which I have given in my first lecture. The largest fortune must ultimately be consumed, unless the causes which influence market prices are studied and followed by the tradesman; while the banker's success has no sound foundation beyond the good business done by his customers.

Persons in the enjoyment of credit are however occasionally led unintentionally into an abuse of their privilege by the fluctuations of prices, under circumstances which render calculation particularly difficult. The means of investing savings in a reproductive manner have not received the study which so important a matter deserves, and great embarrassment is constantly occasioned by an even moderate accumulation of disposable capital. Loans to Government form one of the least troublesome modes of investment, and the desire to avoid the pains of devising some productive manner of employing capital or savings, often favours injudicious plans for raising and spending money on public account. The extent of the mischief done on these occasions is concealed from the view of the parties lending the money, by the usual indirect manner of effecting such transactions. The lenders are besides protected against the immediate loss incurred on such occasions, by the contract being one with the nation at large. It would be a severe, but often not a bad test to which to expose a proposed financial scheme, if the sum raised were to form a distinct stock, the value of which was to depend on the judgement with which the measure was planned, and the skill with which it was carried out.

However, where the financial management of the Government is on the whole judicious, a national debt is of great utility. Like the atmosphere, which absorbs and neutralises all gaseous exhalations from the earth, it serves as a receptacle and reservoir for the flux and reflux of savings and payments, which without an intervening form of investment of similar elasticity, would constantly occasion the greatest disturbance in the trading world. Large as our debt is, it is still susceptible of various influences when the balance of employed and floating capital is in any way disturbed. An abundance of capital in the market, without a corresponding extension of the fields of employment for it, sends up the price of the funds with great rapidity. On the other

hand, the withdrawal of money for the purpose of investment in some other manner causes the price to decline as rapidly. Persons holding stock under these fluctuations are exposed to the temptation of thinking themselves rich at one moment, whereas the supposed wealth vanishes at the next. We have recently had striking instances of this susceptibility in the English funds. In the year 1842 consols stood at 90. The two years 1844 and 1845 were perhaps the most prosperous for the manufacturers of England that ever were known. The prices of raw materials were low, and those of manufactured articles were high. As a consequence, profits and wages were both good. The necessity for investing savings drove the price of consols up to 100 by the month of December 1845. Here no strong inducements actuated capitalists to embark in speculative undertakings. The interest received from the funds was low, while the capital seemingly at the disposal of the fundholder had swoln enormously. The money value of the three per cents. at 90 $\frac{1}{2}$ was 450,000,000 $\frac{1}{2}$ l., at 100 it was 500,000,000 $\frac{1}{2}$ l. It consequently appeared as if 50,000,000 $\frac{1}{2}$ l. had been added to the national wealth in that one form of investment. In truth it would have been much if an additional sum of 5,000,000 $\frac{1}{2}$ l. had been invested in the purchase of stock between 1844 and 1846, but this had the effect of raising the price to 100. This gives us the true source of the inordinate speculations which from time to time excite and then alarm our market. The apparent excess of capital seems inexhaustible, but when it is sought to be realised it dwindles to its original mass. The investment of 100,000,000 $\frac{1}{2}$ l. in railroads and other speculations reduced the price of consols again to 87 by the month of March 1847. By this fluctuation many, who did not know what the effect of the withdrawal of such large sums must be on the funds, thought themselves losers; and as many of these had speculated on the faith of the imaginary property created by the rise, such were seriously injured. A shock was given in this manner to confidence, which was increased by the exportation of bullion that ensued on the failure of the potato crop in 1845 and 1846; a phenomenon which belongs to another mode of using credit, which I shall immediately explain.

That parties claiming credit on occasions like these are considered bound to study the influences under which values fluctuate, is proved by the fact that any one who has not realized

in time, and who is consequently unable to meet his engagements, loses his credit and is no longer trusted. The indifference of commercial men to the studies which alone explain the working of these fluctuations, and the way to anticipate them, is therefore very extraordinary. I have called the errors committed under the ignorance resulting from a neglect of these studies an unintentional abuse of credit; but the world in general draws no practical distinction between losses occasioned by ignorance and those which are the result of imprudence. Credit is as completely lost on the one as on the other occasion.

The nature of the business done in its locality is therefore the test of the credit of a country bank or of a colonial bank with the direction of a central bank, as in the first instance this forms the test of the credit of a manufacturer or merchant with his local banker. Accurate and honest lists of prices current show the fluctuations of markets, the causes of which it is not difficult to trace according to the law of value that we have given. From these lists a general standard of credit can be formed by all bankers, and it can be modified according to the personal confidence which they repose in their customer's knowledge and judgement. It is clear that, although laws may limit and destroy credit, yet nothing can create or extend it, but the conviction that it rests upon the fair character of the person to be trusted. In fact, the number of people who have credit enough to cause their bills to be readily taken is very limited. Endeavours are therefore common amongst traders to associate for the purpose of strengthening their credit. The most common mode adopted is for the drawer of a bill to pass it to his banker, who in his turn gets it discounted with his indorsement. Many bill-brokers, especially in London, act in this manner as bankers, and discount bills at the Bank of England or elsewhere on their own credit.

From the interposition of the banker, to strengthen the manufacturer's and trader's credit, arises the third form under which credit furnishes a substitute for coin. When a manufacturer or a merchant discounts a bill with his banker, the sum placed to his credit becomes a deposit which he can withdraw by means of cheques. These cheques, not being accepted, pass only on the credit of the drawer: the banker is not ostensibly bound to honour them. Their circulation is consequently very limited. A paper more adapted to general circulation is therefore often

substituted by the banker himself, in his own promissory note to pay on demand a fixed sum in the current coin of the realm. This note is in fact the banker's cheque upon himself. This is the most convenient and consequently the most useful form of paper money. It has a limit similar to that which restricts the merchant's credit, as it depends upon the opinion entertained by the public of the banker's character and of the business done by his customers. As strangers can know nothing of either, the notes of a private bank cannot circulate beyond the immediate neighbourhood. If the commercial transactions which occasion an issue of notes are confined to that neighbourhood, such as the sale of manufactured goods for cash or good bills in the vicinity of the factory, notes obtained to pay wages with are met and cancelled on demand by the payments received for the goods sold. But a portion of the manufacturer's payments may be to importers of cotton at Liverpool, of iron at Hull, of dye stuffs in London. A portion of his sales of the finished goods is always made to houses in distant localities. The bills on the latter cover and cancel the demands of the former. The differences resulting from these cross transactions, which take place through the mediation of banking agents, are confined to the respective interest and commission accounts and the profit or loss accruing to the manufacturer.

Manufacturing and all other transactions, in which a number of men depend upon small payments from principals, demand the aid of small notes, or of some other substitute for coin, when bullion is dear or scarce. The payment of daily wages forms the greater portion of domestic transactions, for the sums so paid usually exceed very much the value of the raw material worked up. Hence the most convenient amount for notes is that which suits the daily or weekly expenditure of the workman or his family in money, and we find this principle in operation in many countries. A small currency here secures the individual's liberty who associates with richer men to work a factory, a ship, or a farm. A state of things is conceivable in which banking credits might be used by labourers, but education must make great progress before it can be realized. As has been said, the greater part of the people in all nations has no credit. But the true mode of making the many now without credit understand its value, is by familiarizing them, through the aid of small notes, with its origin and use. Upon these points methodical instruc-

tion ought to be given to all classes. Had the manufacturing interest been as strongly represented in Parliament as the landed or trading interests were, we should not have seen one-pound notes abolished. The argument used to make bankers look disparagingly on one-pound notes affords a curious instance of the spirit of modern legislation, which seldom hesitates when the public good is found to clash with the interests, or even with the inclinations, of an influential body. It was asserted that issues of such small sums were dangerous, because in times of pressure and distrust such notes would be in the hands of poor people, who were sure to present them for payment, and thus to increase the chance of a run for gold. The reason here given appears to me to be most unsatisfactory. The abolition of these notes was recommended to exonerate the banker from the trouble and responsibility of keeping his own credit in a sound state, and of taking on himself the onus of studying the wants of his neighbourhood. A note, like a sovereign, presumes no need of credit on the part of the individual holding it. The one passes as good on the credit of the Sovereign or of his Master of the Mint, the other on the credit of the banker issuing it. Our workmen are not in a position to enjoy credit for cheques; and for small amounts cheques are an expensive medium. The note is the banker's cheque on himself, and he cannot escape the onus of furnishing himself with the means of paying it; for, no more than any of his customers, can he draw a cheque except against a deposit. Thus was a difficulty thrown in the way of paying wages by the abolition of issues, which, because some found them inconvenient, Parliament decreed that the nation should do without. Now had there been no limitation to country issues, and had these at all times been allowed in one-pound notes, there would clearly have been a greater facility for paying wages than at present exists. The measure of this facility it is not easy to fix; still it will scarcely be denied that, to a certain extent, it would have operated as an inducement to vest savings in manufacturing speculations. To such extent it would, therefore, have kept capital at home that has often been unprofitably vested in foreign countries. But undoubtedly much more good would have resulted from preserving a community of interests between the labourer and the banker. Each would have had the best opportunity of studying his real position, and each could not fail to have rapidly discovered the way of improving their respective

conditions. The intelligence of the labourer being awakened by the appeal to his good sense, which he would soon discover lay in the note he was called upon to support in value, would have had healthy occupation, and that of an elevated character. By dissolving this alliance between bankers and their poorer fellow-countrymen, the gulf was maintained which everywhere has too widely separated the rich from the poor, to the loss of both parties and the special degradation of the latter.

In my preceding lectures we traced the emancipation of the individual as accompanying the perfection attained in the instruments of labour. As mankind advanced, and substituted machines for hand labour, or intellectual for bodily power, the poor became free and independent, while the rich were still more enriched. The independent position of the labourer is very much affected by the mode in which he receives his wages. While circumstances compulsorily oblige him to take them in food, as is still the case in many countries, he never can assert or maintain his freedom. Payments in kind of any description have a tendency to grow oppressive, and to suspend the use of the judgement and of many valuable faculties in man. In all really free countries wages must be paid in money. But this necessity involves no departure from the principle of substituting credit for coined money. The use of notes allows of this substitution even where credit is limited. Notes ought indeed not to be called for, except for the purpose of paying wages. There can be no fear of their appearing in over-issues if the rule be adhered to, by which they ought to spring from a real trading transaction. A loan of notes must be considered by the lender tantamount to a loan of coin. The issuer however fully shares the risk incurred by the borrower, and, as we have already said, the notes of a careless issuer are not likely to have much circulation. A note payable on demand is the safest shape for the public in which credit can be exercised.

This brings us to the important question, in what ought notes issued payable on demand be made payable.

To answer this we must trace the course of bills of exchange, the legitimate foundation of note issues. There is in every country a central mart of credit, where debts cancel each other in account. This is the key to modern trade, and the towns that have citizens capable of conducting so important a business are usually wealthy. London is the centre for England, and as

such is the seat of a national bank. When credit is unfettered in the provinces, bills drawn on London replace the notes advanced in discounting by the country banker. With the credit which the country banker obtains in London through bills sent up for discount, he procures notes or coin wherewith to pay his own notes on presentation. In ordinary times the superiority of English manufactures keeps us well enough supplied with gold, to enable us to exchange Bank of England notes for sovereigns. But we have had occasions when it was necessary largely to export gold, owing to the bad state of foreign credit, or to our own bad credit abroad. On these occasions the country banker may find it difficult to obtain gold. But as long as he has good bills, he can obtain notes if he discount them; and undoubtedly there would be an advantage in such cases if the notes of the central bank were made a legal tender. The notes of the central bank might still be payable in gold or silver on presentation, while those of the country banks might be payable either in bullion or in central bank notes. Still with this necessity there appears strong ground for desiring that the central bank should be a private, and not a government undertaking; since the nation has no guarantee that the trust shall not be abused so effective, as the fear of the ruin in which the directors would be personally involved by heavy losses.

Experience shows that increase and decrease of the circulating medium of a country, whether consisting in coin or in notes, follow totally different laws from those which govern the growth of credit under the use of bills of exchange. The amount of credit that can be created by bills, or by such phenomena as an increase in the value of funded property, is fixed by the good or bad state of trade and the consequent demand for transfers. The demand for currency varies, on the contrary, inversely as the state of credit, and more currency is required when trade is slack and credit low, than when credit is good and trade is brisk. When credit is injured the notes of bankers are unwillingly taken, and bullion is sought as the current medium*. But a dis-

* This was first hinted at by Mr. Tooke (*Hist. of Prices*, 1848, p. 130):—
 “It is also important to observe that when the price of bullion was at the highest point, the securities were scarcely, if at all, increased in amount. On the 31st of August 1813 they amounted to 40,105,000*l.*, and the price of gold was then 5*l.* 10*s.*; at the close of 1810, when gold was at 4*l.* 4*s.* an ounce, the securities were 40,973,000*l.*; and in August 1814, when the price appears to have been also 4*l.* 4*s.*, they were 48,345,000*l.* These opposite movements of the two

continuance of the use of notes is always attended with a curtailment of trade, as indeed the supply of bullion does not suffice to answer demands on a large scale. The great use of a small-note circulation is to facilitate the transition from a state of slack trade to one of brisk employment. The reaction commences with a large issue of notes when trade revives after a dull period, but when confidence is restored a smaller amount of issues will suffice to keep it up. A bullion circulation not possessing the elasticity of notes is far more inconvenient; besides, being more expensive, cannot be increased and diminished at will. From the diverging tendency of the two forms of credit, the inutility of controlling the issue of notes with a view to check speculation is self-evident.

The rules suggested as regulating the growth and use of private credit are equally applicable to state credit. A private individual enjoys credit on the condition of his possessing marketable commodities and putting them to a judicious use. Government has credit in proportion to its revenue, the use it makes of that revenue, and the care it bestows upon the sources whence its revenue is derived. It is notorious that many states possessing great natural resources are utterly destitute of credit. They stand in the reputation of gamblers and spendthrifts, who stake their all upon the first whim, or who squander their means in unproductive enjoyments. States that have not paid sufficient attention to the cultivation of their credit, are obliged, like many merchants and traders, to associate with bankers of high standing, in order to obtain that currency for their debentures which allows them to be substituted for coin. Many loans are only recognized in this manner in the commercial world, because they have been brought out under the sanction of the names of Rothschild, Baring, Hope, or other houses that command respect by the skill and prudence with which they manage their affairs. But no state can borrow money beyond its power to pay the interest of the loan, after defraying out of its revenue the expenses necessary to support its administration. To the

phenomena may reasonably excite some doubt as to the accuracy of the hypothesis which regards them as mutually dependent."

Most writers, when speaking of the depreciation stated to have taken place in the value of Bank of England notes during the war, do not distinguish between the effects of over-issue and of the shake which the national credit suffers during the most successful war. See also the Lords' Report, 1819, as quoted by Mr. Tooke.

extent of the current revenue of the year, or perhaps more correctly of the running quarter, the state may emit bills or promissory notes, provided it takes them in payment of taxes. But any irregularity in the redemption of these bills, or any slur thrown upon their full value, exposes them to the same depreciation that private paper experiences under such circumstances. Nearly every country in Europe issues these "exchequer-bills," "bons," or "anticipation debentures," and these issues add to the circulating medium, being under many circumstances a substitute for coin. Many continental states seek to save the interest which in England is paid by government on exchequer-bills. They issue small notes which circulate currently, because the issues of private banks are suppressed. But every continental state has experienced in its turn that there is a limit beyond which neither the government influence nor the convenience of traders can force this currency, and this limit lies mostly far within the limit of the demands of trade. After thirty years of peace, the Prussian government finds it impossible to extend its state issues of small notes beyond the sum of thirty millions of dollars, or 4,500,000*l.*, without the aid of an independent bank. Through the agency of the bank of Vienna, which is a bank of discount, Austria, with a far richer territory and double the number of inhabitants, has perhaps a small-note issue of more than 30,000,000*l.*, consequently one-fourth less than the paper circulation of the mercantile banks of Great Britain under their present restrictions. Russia had pushed the issue of ruble notes to the sum of 595,776,310 rubles. This ought to represent the sum of 45,000,000*l.*; but as the sum exceeded the credit of the government, the notes were depreciated at an early period, and have been redeemed at the value of 15,000,000*l.* The recent issues of the Russian government have been in purchase of bullion. Government notes have, like private issues, only circulation within the sphere where the government issuing them has credit. Hitherto the traders of no country in Europe have allowed a general circulation of foreign notes.

The medium of exchange into which the central bank notes ought to be convertible depends of course theoretically upon the wares that are of most current circulation. Practically gold and silver are the wares preferred in all countries at present. Whether gold or silver ought to be selected depends upon the

convenience that either presents ; gold, we have seen, has at all times been chosen for distant and expensive carriage ; while silver has accompanied ventures by sea where the freight is trifling. Railroad conveyance has now made it easy to transport silver by land ; a result that may be expected from this change will be a more constant ratio between the values of these two metals than in former times, and a diminution of the preference that formerly existed for either. It cannot be denied that at present there is strong reason why the notes of the central bank should be payable in bullion, and this is to be sought in the state of credit in the country and in the trading world at large. In all countries a large portion of the population is ignorant of the nature of credit, of its advantages and obligations. A still larger portion is excluded from the use of credit by their own fault or by their position. By those who keep no accounts a standard of absolute value is required, but it is evident that the community suffers by their ignorance and by their privations. But with the growth of that knowledge which gives birth to credit, we may look forward to a constantly diminishing necessity for coin, and even for notes, but without the slightest alteration in prices resulting from the change.

If we analyse the revolving elements of industry, we find them everywhere to consist of raw materials and labour combined to produce manufactured articles. The manufactured articles must after all pay for both ; and wages being mostly consumed in the course of production, there can remain but a small amount uncanceled between the producers and the consumer, which forms the producers' savings. If the producers get lodging, food and clothing, it must be indifferent to them whether it be through the agency of a note or a sovereign. But it may appear otherwise with respect to savings, and each has an undoubted right to choose the form in which he will have his savings kept. But when the most ignorant has proceeded thus far in reasoning on the nature of money and of gain, he will easily see that gold is not an advantageous shape in which to keep savings. It cannot even be kept by a banker but at an annual loss for guarding it, unless he be allowed to issue notes on its security. This train of argument leads to the reason why savings' banks can pay no interest if the deposits entrusted to them are to be kept in bullion. The workman, if instructed in this manner, would see in what way he becomes a partner in the great industrial concern of which all

are members. It is true he stands in that position as regards his wages; but it comes home to him more clearly when he has to look for profit on his savings. The fund out of which profits as well as wages must come is one far more vast, more valuable and more beautiful, than the richest gold mine. It is derived from successful exertion in agriculture, manufactures and trade; and to derive his share from this fund, he must, like others, risk his venture; he must contribute his efforts moreover to maintain peace and promote intelligence, without which there will be no fund to divide.

Men who were induced to agree in the view I have taken of a savings' bank would find nothing wonderful in the undeniable fact that, after a few years of successful exertion, the savings of the working classes (to say nothing of any others) amount to a sum which it becomes impossible to keep in the shape of bullion. They would see how, by purchasing into the funds, they really lent their money to speculators, but upon the security of the nation at large, whose credit is staked to guarantee them from loss. It would therefore not appear less absurd to those men, than to others who have studied the subject, to demand repayment of such investments in gold during a moment of panic, since by enforcing such a demand they would infallibly destroy the only security they hold for their savings,—the national credit. Every pains, I repeat, ought to be taken to convince every man who desires a return for capital, that he can only obtain such return by himself contributing to support the national credit, which means the prosperity of agriculture, manufactures and trade. In countries where no such mode of investing presents itself, the purchase of land is the common mode of employing savings. But by this means land soon attains an enormous price; and if the difficulty attending its cultivation through honest tenants be fairly estimated, it leaves little or no profit to the owner. Such is now the case in most parts of the continent of Europe. Where savings can be used as circulating capital in agriculture, manufactures and trade, there rents, interest of money and wages are highest. In this position is England, as are also Holland and the United States of America.

We find, therefore, nothing exceptional in the position of the labourer which should exclude him from the knowledge concerning and the use of credit which the capitalist enjoys. When knowledge of this kind shall be duly spread, it will lead in all

probability to the mode of investing savings in joint-stock banks common in Scotland, and will relieve the country from the danger which now threatens, when confidence is shaken, from a run upon the savings' banks.

As a partner in the great national scheme of industry, the limitation now imposed upon the issue of bank notes is oppressive to the labourer, as it is to all other classes. There undoubtedly is a tendency, as intelligence progresses, to eliminate the note from trade, in the same manner in which the coin has been discarded, and to confine commercial transactions altogether to book debts and letters of acknowledgment. But this progress is not one that can be aided by legislative interference. Like the coin, the note must be used until the world has educated itself to dispense with either. There is moreover far less inconvenience attending the use of notes than of coin, as they can be withdrawn from circulation without loss, which we have seen cannot be done with coins. It is this elastic quality in a note circulation which makes it safe to resort to it on emergencies, and which has steadied prices in so remarkable a manner since credit has been a recognised element in trading transactions.

Coins, being money possessing intrinsic value, form clearly a portion of the national capital. If traders choose to employ a part of the national capital in facilitating transactions that could be performed with less costly agency, their doing so occasions *pro tanto* a loss. Nothing therefore can be more natural, when food or raw materials are wanted from countries that prefer gold contracts to others, than that an effort should be made to employ this sunk capital productively. To the extent to which it has been employed to do what notes could have performed, it then becomes necessary to replace the exported bullion with notes. No addition is made to the national wealth by this procedure, and of the wealth which the nation possesses a portion is unquestionably sacrificed when corn is imported. The substitution of notes at home prevents the check to industry, which in famines usually aggravates the general loss, by stinting the fund that alone can make it up. Such a temporary exportation of bullion is sure to be followed by a reaction, for the corn-exporting countries will desire to obtain articles of use or of enjoyment in place of the gold they have received. The precious metals find their level like water in the commercial world, and flow more readily than other commodities in the direction of a demand for

them. Should the greatest demand be in the country that had previously exported them, they form on their return an addition to the currency of that country, and in all probability would once more displace a portion of the notes which had been issued to replace the exported coin. The mere fact of the return of the bullion is however of itself no index of the recruited national wealth. An addition to the national wealth can only be obtained through profitable sales of products of some kind, and the profit may be very well remitted in produce,—in fact, more advantageously than in bullion. It is not possible to lay too much stress upon the fact that money is a mere tool, useful in certain phases of civilization, but not indispensable in others, for the production of wealth, and that its presence in any mass is a most questionable index of the productiveness of industry at the time and in the place where it abounds.

It must excite surprise that, in the face of many incontrovertible historical facts, the most important of which have occurred within the memory of the present generation, any one can assert that an unlimited paper issue is possible, and therefore to be dreaded. It is clear that credit is of slow growth, and that governments in this respect have no advantage over individuals. No state in Europe is at this moment allowed by public opinion to attain the limit in the extent of credit which it might reasonably enjoy. It will not therefore be denied that over-issues of paper have nowhere been tolerated by public opinion, and that in a *peaceable manner they are not feasible*. A government that uses its military power to enforce a circulation of deteriorated notes, does what in former times was done in another shape, when coin was debased unnecessarily, or property openly seized and confiscated by the crown. To force the acceptance of depreciated notes in payment is robbery, as the emitting such secretly or under specious pretences is swindling. The crime lies as little in the medium selected, as it does in a case of murder in the instrument which the assassin uses to perpetrate his deed. Forced emissions of paper without value took place during the last war in many countries of Europe. The French assignats, the Austrian notes, and the Russian ruble assignats were tantamount to warlike contributions levied in great exigencies. At the same time the French occupying armies were in the habit of seizing provisions and forage where they found it, without the formality of payment of any kind.

These cases are analogous to the constant persecutions of Jews and usurers in the olden time, accounts of which deface the histories of all nations in rude periods. A later instance of unauthorized and reckless proceedings by the exchequer in England, was the forcible detention of the goldsmiths' deposits of bullion in the Mint by Charles II. From aggressions of this kind deposits arising out of credit are secured; since by their nature such deposits have only value as long as credit is not endangered. The history of the last war affords an amusing instance of this fact, and a curious illustration of the notions of ambitious rulers on this subject. It would seem that one motive which induced Napoleon to overrun Holland in 1794, by an abrupt invasion in winter, was to surprize the Bank of Amsterdam, the credit enjoyed by which rested on the supposition that its deposits were locked up in bullion in its coffers. The general who occupied the city accordingly paid his first visit to that celebrated establishment, and was not a little mortified to find that the coffers contained the much more sensible securities of the provincial States of Holland, being acknowledgments for the sums lent to them to make agricultural improvements. The value of these debentures had been destroyed by the ruinous effects of the war; but happily, under the circumstances, it was only the conqueror who was the sufferer.

These two instances show how little the credit of a country, or even of individuals, depends upon masses of gold and silver, provided the conditions that credit enjoins be complied with. The gold deposits seized by Charles II. did not destroy the credit which the nation commanded from other sources, nor would the existence of the expected bullion at Amsterdam have modified the effects of the unjustifiable aggression of France on the Dutch. In the same manner, no amount of bullion in a country can save the trader if he does bad business, and if business be judiciously managed the country will want but little coin.

The good organization of credit in England enabled her manufacturers and bankers to economize their resources so well, that even the restrictive law of 1819 (which assumes that the stock of gold in the country is the standard of credit in England) was not allowed greatly to injure our manufacturing industry. The want of small notes for daily use was in part compensated by a total disappearance of all bullion payments of large debts, by which means the great bulk of the coin in circulation could be

commanded for wages. Savings-banks aided this wise economy, by taking away all inducements to hoard coin. But a pressure was still revealed by the rapid spread of the truck system (which is but a substitution of payments in kind for money wages) in England, and by the continuance of the conacre and other similar antiquated prædial arrangements in Ireland. On the other hand, evidence of the advantage of facilitating trade by means of credit, made available through bankers' notes, may be especially drawn from the rapid rise to prosperity of Paisley and Greenock, which can be traced to that source. The banks to whose issues these towns are so much indebted are the result of highly cultivated intelligence, applied to form associations for the spreading and utilizing of credit. Local banks owe their security to the knowledge of the transactions passing in their locality, which their resident directors can acquire. Joint-stock banks have an advantage over private banks in the number of persons interested in their success, and the consequent extent and variety of the information they command. It is not easy to imagine a more perfect form of a bank than is presented by the Scotch joint-stock banks. The small shares make them serve as savings-banks; while the deposits not only bear interest, but form a source of credit specially available for the traders, manufacturers and labourers of the localities where they are established. A striking testimony to the efficiency of joint-stock banks may be found in the clause that until lately was inserted in the charter of the Bank of England, by which the foundation of a bank by more than six partners was prohibited within sixty miles of London; the prohibition having evidently been dictated by the fear of rivalry.

Opinions are however divided on the safety of allowing bankers the control of their issues. Amongst the conflicting notions which prevail respecting currency, one almost induces a smile when gravely proffered. The idea that the currency of a country belongs to the king, and that no medium of exchange can be tolerated except with the royal sanction, tends to load royalty with no fair responsibility. Mr. Loyd ridicules the opinion given in evidence by Mr. Ward:—

“Individually, as a Director of the Bank, I do not presume to alter the king's currency, but I endeavour always to bring the paper as nearly as possible to what the currency would be if no Bank existed, and the currency were all gold.”

To this Mr. Loyd subjoins:—

“Who then, we may ask, has ‘presumed to alter the king’s currency’ during the last year, when we find by the accounts before us that ‘had it been all gold,’ the decrease would have been 5,800,000%.; whilst being a paper circulation and a Bank existing, the decrease has been only 600,000%.”

Mr. M‘Culloch is equally amusing on this point:—

“So long as any individual, or set of individuals, may usurp the royal prerogative and issue paper without let or hinderance, so long will it be issued in excess, in periods when prices are rising and confidence high; and be suddenly and improperly withdrawn when prices are falling and confidence shaken*.”

My answer to this is, that the king has the prerogative and the responsibility of affixing his stamp to pieces of coin, because his mint officers are able and are bound to ascertain that the *intrinsic* value of the coin they issue is of a certain standard. Notes have no intrinsic value; their value is altogether *extrinsic*, and depends on the credit of the party issuing them, for which neither the king nor his officers are able or desirous to become responsible. Notes represent mediately the goods that are stored in warehouses or elsewhere, of whose existence no one but the merchant, or the banker who gives him credit, can have any knowledge. The right of the trader and the banker to claim credit of their fellow-citizens has therefore nothing to do with the king’s prerogative, and to advise the crown to issue other paper than exchequer-bills in anticipation of the annual revenue, is to recommend the king to issue false money.

Some, who think with me regarding the general utility of banks, may still hesitate as to the expediency of continuing the privileges hitherto granted to the Bank of England as a national institution. Suggestions have been made from many quarters deserving of attention, to the effect that the crown might issue small exchequer-bills or other debentures, which would answer the purpose of a paper currency. This is the plan, as we have seen, adopted in Russia and in Prussia: it was followed during the war by Austria and France; but it everywhere led to difficulties in time of trouble; for ministers, who as private individuals would never abuse a pecuniary trust, are apt to prove lax in this respect when they are acting for the nation. Patriotism veils the immorality of public issues in payment of public

* Notes to Adam Smith.

services, even where there is no fund to defray them. It is to guard against this abuse of confidence that a national bank, through or by which advances are made to the crown upon exchequer-bills, has been finally preferred in all the European states that have cultivated their credit. In fact, if we take into account the power which any well-managed private commercial establishment possesses of acquiring confidence and adding to its wealth, it is doubtful whether, as a pecuniary speculation, the Bank proprietors would not do as well to stand alone and compete in the market for the public business. As it is, the existence of the Bank has often been staked on the views of men who are not bankers. If the Bank stood quite on the footing of a private establishment, it is likely that its branch banks lately established in many country towns would be dropped, or converted into mere clerks' establishments. The inconveniences that would result to the nation from such a change would however be serious, since the competition of several establishments for the national business would open a new source of jobbing and demoralization. The means would then too be lost (which indeed now are not used) of making our colonies partakers in the benefit of the national credit. Branch banks of the Bank of England would perhaps in the colonies be so much more useful than similar establishments in this country, that instead of doing away with private banking by opposition, they might, like the central bank itself, be made subsidiary to private banks, and thus impart a most useful stimulus to trade.

If my sketch of the origin, the working, and the usefulness of credit be correct, it follows that it carries with it a powerful check against its abuse, and that this check, without being repressive, is more effective than any direct limitation that has ever been devised. Credit can exist in no country in which life and property are not secure, and whose inhabitants have not the moral power to resist temptation to gross vices. The higher the intellectual and moral powers of a people are cultivated, the greater will be the credit that both individuals and the nation command. This leads to two important results. A nation that enjoys more extensive credit than others cannot fail to become richer in material wealth than they, and consequently to be able to command a greater share of intellectual enjoyment than its neighbours. Credit is one of the most valuable possessions therefore that we can procure, and deserves to have the attention of every man and of every government turned to the modes

of extending and securing it. We shall find that every maxim and every law, the observance of which tends to improve credit, is invariably in accordance with the dictates of sound morality and religion. The detection of such laws and maxims is not a merely beneficial subject for the employment of the mind, but is a duty imperative upon all. Its urgency, like that of other beneficial laws of nature that I have noticed, and to trace the working of which is the privilege of the political economist, is accompanied by the promise of an unfailing reward far more than is proportioned to any sacrifice which the fulfilment of this duty can impose upon man. Credit stands in the same relation to metallic money, that machinery does to hand-labour. With coin, small transactions, limited to fixed localities, can alone be carried on. Credit makes men masters of every corner of the earth: it frees us from the oppressive dread of over-population, and other fancied evils that weighed upon ancient communities. A bill of exchange, which is a receipt for goods transferred, renders the same service to the trader that the compass does to the navigator. By its agency he guides his course over the ocean of adventure, without the landmark of gross and tangible bulks that menace with other dangers by their vicinity.

Moreover, since credit is a possession essentially personal, it is the great equalizer of the conditions of men. Let those masses in every country that are now suffering from physical and intellectual privation be above all things taught the value of credit, that it is the sole means of giving them the command of abundance, but that it can only be obtained by following the rules already pointed out, by observing temperance, respect of property, and strict punctuality. If they conform to these rules, even the millions that now languish in hopeless endurance will be raised to wealth and enjoyment. The difficulty clearly lies not in the want of means to effect such a change, but in the reluctance of an uneducated mass to abandon prevailing habits.

Credit, Gentlemen, that powerful instrument which I have so imperfectly described, is, finally, a result of association. There must be two parties at least to every credit transaction; one must trust, and the other be trusted. I have sufficiently shown that credit is favourable to individual liberty; and, since it stands these two searching tests, I think I may call upon you to agree with me, that the aim in every good monetary system ought to be, as far as possible, to substitute the use of credit for that of coin.

LECTURE VI.

TAXATION.

FOR a discussion respecting the most convenient mode of imposing taxes, it is not necessary to enter into a detailed statement of the circumstances which may render the payment of taxes necessary. Still, so many erroneous views have been propounded on the subject, that it may be well to call your attention to the leading features that a good system of taxation should present. From the preponderating importance of intellectual power in human concerns it follows, that the best and most desirable imposts are those which favour intellectual progress: such as tend to facilitate by direct means the production of material objects, their adaptation to use, or their exchange in trade, are of far minor importance, if not of general questionable utility. To promote true religious feeling, which we have seen opens to our persevering inquiries the fund that is at our disposal as the gift of an all-just and all-merciful Creator, and which teaches us how to enjoy these bounties for our own and each other's advantage, is the first step of industrial organization. The modes of adapting the objects thus given for our use are as unfettered by nature as the gifts we command are unbounded. Our reason is our guide in this attractive pursuit, which, if education be rightly administered, need involve but little toil. In the early stages of every society great sacrifices are therefore instinctively made for the acquisition of churches and schools. As wealth accumulates these invaluable institutions ought to engage the chief attention of the community, and taxes imposed for their support, and for keeping them in an efficient state, by continually freeing them from those excrescences which become apparent as knowledge grows refined and is extended, are the most legitimate and reproductive that can be suggested.

Security of life and property is one of the important results of good educational measures. Neither science nor labour can prosper where this is not found. But where intellectual pursuits are cultivated and properly secured, we have seen wealth

accumulate and political power respected on the rocks of Syria, in the swamps of Venice and of the Low Countries, as on the moors of Lancashire and Yorkshire. The principle of association, too, must be fully recognized to make any system of taxation effective and tolerable. A very narrow view of the subject is therefore taken by those who assume that cultivators of the intellect and of the feelings do not sow, reap, or spin with the direct labourer, and that good teachers are therefore unprofitable members of society. The decline of every state, as history records, was announced by abuses in religion, decay of science, of the arts and of letters, and by the attempt to promote selfish interests at the cost of the community at large. The decline of intellectual progress is first indicated by an indisposition to association.

Taxes are usually distinguished as being "direct" or "indirect." A better distinction would be, to call them, according to the mode of imposition, either taxes on Production, or taxes on Consumption. Taxes on production are those which to inexperienced eyes promise most, because it appears easy to seize the amount at a period when it can be effectually controlled by calculation. Such taxes are common in rude stages of society. The most usual, and even now the most widely-spread in the Old World, is the tax known by the name of Land-tax, but which is in reality most commonly a produce-tax. In the earliest stage of the growth of national wealth the land forms the only capital, and its produce is the only revenue. It is therefore natural that taxation should fall upon the produce, and, if taken in kind as a simple deduction from the consumption of the inhabitants of the country, such an impost has then nothing oppressive in its nature. Similar payments form in every country the original rent of land, as well as the fund for the support of the clergy, officers of justice, and other persons whom it is indispensable to release from bodily labour, in order to promote the cultivation of intellectual power. Rents and salaries are still paid in this manner, in kind, over a large portion of Europe, and in nearly the whole of Asia. The entertainment of servants and dependents, if it include their board, which is a common practice in all countries, forms a part of the same system. Such remuneration for services involves necessarily a close dependence on the soil whence the produce is extracted. A population that can only be taxed in this manner must be

comparatively stationary. Travelling can only take place by the aid of hospitality, which supposes the traveller to find superfluous produce where he goes for his subsistence; since he cannot carry his food about with him, and he possesses nothing wherewith he can requite the favour. Under these circumstances it becomes, too, indifferent whether a man works alone or associates with others that possess more intelligence. Hence produce-rents replace labour-rents but slowly. Large standing armies are in such a state of things levied by conscription from the inhabitants indiscriminately, there being little relative difference of value between the labour of one man and that of another. The immense standing armies maintained in Prussia and Austria are now only complete at seasons when agricultural labour is not impeded by the abstraction of the peasants from their homes. During the summer, and at harvest-time, more than three-fourths of the soldiers are sent home on furlough. A large portion of the contribution hitherto paid by Hungary to the support of the Austrian army has always consisted of corn and forage. Throughout nearly all the Austrian empire the peasant has been obliged to lend his house as a barrack for troops. The Russian army is not only lodged in the houses of the people but fed at their boards. Under such circumstances alone would it have been possible to maintain vast bodies of men in comparative idleness, in countries having little trade and a very faulty organization of labour. The church is throughout Russia supported by contributions in kind from the people. In a great portion of Germany offerings in kind to the pastors form a large proportion of their salaries. In Sweden the number of "funnor," or barrels of meal, paid away as salaries figure in the budget.

Now, although contributions levied in this manner form unquestionably a produce-tax, yet the tax is a tax upon consumption, since the parties paying it can do scarcely more than consume it, or let it rot if it be not taken from them. The whole system supposes an absence of means of communication, or other faulty arrangements that are repressive of trade, and a state of society practically not very superior to that in which the conquering Goths and Burgundians in the fifth century made similar arrangements with the inhabitants of the countries which they subjugated. Little political power can be obtained under such arrangements to oppose to the power of trading nations;

for troops raised, housed, and fed on the pittance of an agricultural population cannot well be concentrated, and their discipline and condition are sure both to be bad. The success of British troops maintained by a commissariat and paid with money drawn from trade has ever been remarkable when opposed to numerically stronger forces depending on the resources of the scattered population about them.

As long as society remains in this state, in which, as all produce is consumed at home, a produce-tax is identical with a tax on consumption, there is no choice but to draw directly upon this fund for taxation. But it is a great mistake, as we shall see, to consider that such is anywhere a lighter mode of taxation than levying numerically much greater revenues from other and better-organized resources. To prove this we must follow the growth of wealth as the fund whence taxes have to be drawn.

Taxation causes at all times a pressure. Produce-taxation of the kind we have just investigated has a tendency to throw land into the possession of large landholders, by the simple operation of the growth of population. Without improved organization it becomes in every successive generation more and more difficult to give up the same amount of produce as the preceding generation paid. By associating with some landowner on the terms of subjection and consequent irresponsibility, the burthen of taxation is thrown from the poor cultivator upon his richer neighbour. The power of the latter, as the commander of a train of vassals, causes the government which demands the tax to limit it at least to a proportion of his gain, *after all the labourers who work for him are nourished*. A judicious arrangement of the kind would produce a larger fund than before, and no one would be a loser by it. But the oppression which drives men into prædial slavery supposes a neglect of intellectual cultivation, and the new arrangement is not commonly an improvement. In Russia the government can demand no land-tax from the powerful nobles. In Hungary likewise the large territorial proprietors pay no land-tax. This was the case all over Germany before the peasants were made proprietors of the soil, a change which the government connived at, because they were then able to tax them. Since the peace a land-tax has in some German states been paid by nobles, but in nearly all the noble's tax is less than that of the peasant; in Austria it amounts to

one-half; in other places the noble is quite free. It is for the purpose of getting this land-tax that the continental governments favour the splitting of land into such small holdings as I have described in the third lecture, and which offer a very bad distribution of labour in those countries, by absorbing a large proportion of hands in agriculture. A similar tendency may be observed in British India, where it has been considered wise policy to break down the large landowners to the condition of unresisting ryots, as the only mode of obtaining the land-tax levied there. In some recent land-speculations by British cultivators these have associated into powerful companies, who have made terms with the East India Company.

Even when levied in kind, we must distinguish between a tax rated on the cultivated surface of the soil from one rated according to the productiveness of the crop.

In all European countries it is usual to fix a proportion of the produce, or a very moderate valuation in money, as the rate payable by a certain measure of land. The assessment having been made with the cooperation of the villagers, and their traditions as well as remonstrances having had some weight with the crown, a tolerably just apportionment was *in the first instance* obtained. But it must not be lost sight of, that where there is no market for produce, and each cultivator only grows what he consumes, there is little comparative value in land. It is only when produce has to be carried to market that the calculation of distance occurs. The same assessment that before was not unequal, becomes immediately seriously unjust as soon as this new element is awakened. Lands near the market, on the banks of a canal, or adjacent to a sea-port, can evidently add all the difference in the cost of carriage to the value of their produce, and can thus afford to pay a higher tax than more distant lands. Again, when trade is opened a demand arises for a variety of products. Let us suppose two farms; one near a sea-port where rape-seed was in great demand, and one thirty miles distant from that port. If to grow rape on both farms it became necessary to buy some article of food at the port, the nearest farm would not only have to transport its produce a shorter distance, but would have less cost of carriage on the food purchased, and thus would gain doubly over the more distant farm. Hence the latter farm might be thrown out of cultivation by a tax which the former could well afford to pay. If the tax be levied in money

instead of being taken in kind, a trading transaction becomes obligatory on the farmer, who is not bound to incur it unless so pressed. He is then reduced either to employ a portion of his small capital in means of transport, and to let his servants and horses for a certain time remain out of sight, or to make a sacrifice to a dealer in the neighbourhood, who transports it for him. In a country in an advanced state of organization he not only finds a dealer, but the dealer finds a carrier. The accumulation of capital is thus a great assistance to the land-cultivator. It is the neglect of the change which circumstances make in the assessment of so rude and impolitic a tax as the land-tax, which now causes such dissatisfaction in our Indian territories and in many parts of the continent. From the reasons I have given it is easy to understand why some lands should scarcely feel a rate of assessment which must throw other lands out of cultivation.

As soon as trade is opened the incitement to produce is wonderfully increased, but the carelessness that formerly prevailed respecting the surplus produce of the land, which made men in some degree regardless of taxation, is dispelled. All that can be rescued from the tax-gatherer is now gain to the cultivator. But as the cultivator then takes the risk of market-prices, his rates must assume an average form, and the transition must then be made from an assessment on the produce to an assessment on the land. The most advantageous rates are thenceforward charged at so much per acre. By this change it is clear that inducement is held out to cultivate the land to the highest perfection, since all that exceeds the rates charged upon it is clear profit. This is the operation of a fixed land-tax, like that assessed in England. Such a tax becomes practically redeemed after every transfer by sale or inheritance, when other kinds of capital remain untaxed. If other capital is similarly taxed, the land-tax is not allowed for on transfer, the relative value of property not having changed. One practical result testifies to the difference between taxing land alone and taxing it together with other capital. If land is taxed alone there will be a disposition to redeem or capitalize the land-tax. If other property be equally taxed there will be less inducement to redeem it. Taxation upon land, for whatever purpose, is all drawn from the same fund, the profit of the cultivator. The limit of taxes on land are the exhaustion of that fund, and consequently no land will be cultivated until a profit can be obtained equal to the current gains of industry over and

above every charge, whether for rent, tax, tithe, county or parish rate, to which cultivated land is subjected. This will explain why, notwithstanding the high price of produce and the demand for building land in Great Britain, so much uncultivated land is still found in these islands. But since the cultivator's profit grows and diminishes with all the efforts made to increase the gains of industry, it follows that a tax upon produce or upon land is in some cases a much greater burthen than it is in others. The limit to cultivation in countries where these demands are fixed can be calculated. This limit is moreover constantly extended by local arrangements. Of late years no continental state has levied tithe or land-tax on reclaimed land (Neubruch). During a fixed period the crops on such lands are exempted from taxation, under which arrangement, if the reclaimed lands yield no rent they may at least furnish the wages of labour. Countries entirely exempt from land-tax, such as Hungary, Russia, Wallachia and North America, can extend their cultivation unimpeded over any breadth of land, as the demand for produce holds out inducement. These countries also contract their cultivation without inconvenience when the demand subsides. Had not some nations been in this natural position during the last ten years, there would have been a lamentable loss of life and consequent diminution of population, resulting from scarcity of food in Europe. We have been indebted exclusively to lands that are not encumbered by a land-tax in any shape for the means of subsistence that we have drawn from abroad.

It is a favourite argument with the defenders of the present revenue system in British India, that the land-tax there levied is in fact only the rent of the land, which is drawn by the Government as proprietor in chief. We need not here discuss the legality of any such claim on constitutional grounds; but it is evident that so radical a difference exists between land or produce-taxes and rent, that it is scarcely conceivable how any one should seriously have confounded the two. Rent is the hire of land paid for its use, and consequently varies with its adaptation to production. The amount paid by a tenant for land is governed by the *fertility of the soil*, the climate of the country, the situation of the farm, the density of population in the neighbourhood, the degree of intelligence subsisting among the people, the power of associating enjoyed by the inhabitants with indi-

vidual freedom (that is to say, the good or bad constitution of the government and the laws); in short, by all the influences which determine the prosperity of countries, or their poverty. Under all or each of these respective influences, the rent paid will be high or low on every separate holding; and the tenant makes his calculation according to the prospect of profit held out to him. The average rent of a country is high or low according to the number and importance of markets, the state of means of communication, and other local advantages, but always subject to the preponderating general influences of good government, security of property, and freedom of exertion. Still, could we suppose an average rate of rent to be fairly calculated for a country like England, it would be most unfair to assess all lands by such a standard. The grounds now paying less than an average rent would not by a mere decree (such as some visionaries have imagined) be rendered capable of paying more than before, because the well-situated lands paid less than they used to pay. The result of any such attempt would be to throw great profits into the hands of owners of well-placed lands, and to throw those lands which were worse situated altogether out of cultivation. Now, a land-tax, by assessing an even rate on lands of all kinds, levies an average impost in this manner and with the same result. It is impossible to levy an equal assessment, that can be paid by any extent of cultivated land, without rating in such a manner as to cause it to fall lightly upon well-situated land, and so heavily on others as to prove a practical prohibition to cultivation. In British India, immense tracts of waste land are kept unproductive by the operation of the land-tax. Some officials, who had a notion of improving the revenue by a deviation from the strict rule now enforced, have conceded *the privilege of cultivating unoccupied land* at a modified land-tax to parties willing to bring it under cultivation. These proceedings were in the most instances disavowed by the Indian Government, and the new occupants ejected.

One incident of this kind, such as is documented by a proclamation of the Bombay Government dated 20th June 1838, stamps the impost now levied in India with the indelible mark of a land-tax, and distinguishes it sufficiently from rent. This land-tax cannot bear the competition that rent supports; and for obvious reasons. It does not depend upon the local advantages or disadvantages of the land, any more than on the moral

or intellectual improvement of society ; it is not measured by the fund created with the sweat of the planter, nor is it sanctioned by his concurrence in the rate of assessment. A fixed rate, carried over the surface of one of the most varied as well as the most extensive empires, without regard to sites, soils, or situation, from which wealth and poverty are alike without appeal,—this is no bargain of choice between freemen, but a badge of slavery imposed by conquerors upon bondsmen : as such, we are told, it was exacted by the later Mahomedan conquerors and by Mahratta predatory chiefs.

The land-tax can only be claimed as rent in those parts of India where the old proprietors have disappeared, and the tax-gatherer has assumed their place. For it is notorious that *land has been held as private property for centuries by the same families*, many of whom have title-deeds to show. It is equally notorious, that improvements made by individuals at great cost have, in many parts, raised the cultivation and rendered poor soils productive. Tanks and works for irrigation and drainage, with all the necessary accessories of even the humblest human dwellings, have been constructed by the investment of private property ; and a comparison between what has been done in the way of public works under our rule, and what the Native sovereigns did for the people, or allowed the people the means of doing for themselves, is not to our advantage.

Now, it is upon a complicated structure of society like this that a claim for a uniform rate of tax is superinduced, and enforced to the disregard of the thousand shades of right, and the rewards of industry, which has been the eloquent theme of high-minded statesmen, and which, although denied, has never been disproved. To levy a tax imposed after cultivation has introduced rights and relative values, and to assess that tax at an arbitrary rate utterly independent of the rights and values thus created, is surely not to found a claim for rent. Then, let not this tax be called rent, with which it has nothing in common.

The fallacy that this tax is levied in British India in lieu of rent being once rejected, the calculation which we put forward last week tells with its full force. In comparison with other taxes the land-tax is the most oppressive, and is consequently the least productive that can be devised. It presses on the opening link of the chain of associations which commerce gives birth to, and prevents its growing to that length which at its

other extremity would easily support a tenfold pressure. Its effects are clearly the same in Asia as in Europe, although the degree of intensity with which the people suffer is different in each of those quarters of the globe. The invariable accompaniment of an excessive land-tax is the breaking up of the soil into small areas for cultivation, and a consequent bad economy of agricultural labour, which does not allow of a realization of capital. Judicious taxation, on the contrary, encourages the free movement of every trading association, until the results of united exertion assume the shape in which they are to be consumed. At the last stage the amount is undoubtedly largest on which the tax-gatherer can lay his hand ; and he is wise in staying his grasp until it arrives.

The field presented by British India for organizing Tropical agriculture is so vast, and the impediments now obstructing this organization are so palpable and oppressive, that the interest awakened by a study of those magnificent countries becomes all-absorbing. It is, too, the more necessary to regulate the industry of British India, that its present paralyzed and unproductive state holds out inducements to undertakings elsewhere, which ought to be directed by a due knowledge of the competition that may be expected when a reform is introduced into Indian government.

It is also evident that so narrow a rule as Mr. Ricardo has given respecting the effect of taxation upon raw produce, as though such taxes invariably raised the price of produce by the amount of the whole tax, cannot be taken strictly. For countless efforts at association would immediately be made to meet the difficulty while it remained, and recourse would be had to tropical food, rice and sugar, which would lower the price of the object taxed (wheat for instance), by the value of the superior convenience of an import or consumption-tax over a produce-tax. This rule is a part of that erroneous theory of rent, the fallacy of which has been shown in my second lecture. Like rent, the fund raised for taxation is subject to increase and decrease with the value of the different crops that can be raised on certain soils. Were grain to become very dear, it is probable that fen land, on which no grain can be raised, would go out of cultivation, for want of persons able to buy butter and cheese. When grain became cheap the cultivation of such land would doubtless be resumed, independently of all influence of taxation. If corn should re-

main continuously at a low figure and some obstacles to our trading prosperity be removed, there is reason to believe that the sandy heaths of Surrey and Hampshire, the remaining moors of Yorkshire, and even the mountainous tracts of Ireland, may be brought under cultivation for some uses that cannot be indulged in while the condition of the country is not a prosperous one. But in taking into consideration the operation of any given tax upon raw produce, it is clear that it must be taken concretely with all other recommendations or disqualifications arising from situation, from the state of intelligence amongst the population, security of property, and the value of the particular crops for which the land is suited, and that its operation will be a complex one resulting from all these, and not a simple effect shown by the figure of the tax levied upon produce.

Taxation is a difficulty imposed between production and consumption, which can be met within certain limits by an exertion of ingenuity. I have given one instance of the operation of association towards reducing the disastrous effects of an oppressive produce-tax.

The principle which induces association for the purpose of throwing the burthen of taxation upon capital, which becomes better able to bear it in proportion to the accumulation of disposable capital in a country, applies to all manufactures and occupations of whatever description, as well as to land. A tax upon any kind of production which demands an advance of capital, invariably causes large establishments or associations as a means of averting the pressure. The malt-tax favours large breweries, which are again favoured by their having credit with Government. Sugar-refineries, distilleries, and all trades which require an advance of duty, only succeed where large disposable capitals can be applied to work them. But the command of capital more than compensates for the inconvenience of advancing the duty, as is proved by the success both of English sugar-refiners and distillers.

The levying a tax upon any object in the field occasions an advance on the part of the grower, which, by absorbing his capital, often incapacitates him from undertaking the cultivation of the soil. The same tax levied at a later stage (for instance, from the dealer or the shipping merchant) is less oppressive than a land-tax, because it falls upon two occupations instead of one, and the period of the advance is diminished. Taxes of this

latter kind are malt and spirit taxes. The English malt duty amounts annually to about 5,000,000*l.* The spirit duty produces in the year 2,500,000*l.* It would be manifestly impracticable to levy so heavy an impost on barley or other grain at harvest-time, and the attempt would have the result both of materially raising the price of beer and spirits, and of causing barley to be discontinued as a crop in England to a great extent, if not altogether. Hops with the present tax could not be grown in England except under a protecting duty, and not even with this aid unless credit was given for the duty, which is commonly done on the security of the poles. Export dues, such as are levied in nearly all our colonies upon tropical produce, are a minor evil; and, as the state of our West India and other colonies shows, are more easily supported than a land-tax. An export-duty leaving cultivation free would not, even if raised at a higher rate, have the effect which the land-tax of $1\frac{1}{2}$ *d.* per lb. in India has upon the growth of cotton. The export-duty levied in India on sugar is much more easily borne than the land-tax, which also limits the extent to which sugar is there produced. But our import-duty in England on sugar is $1\frac{1}{2}$ *d.* per lb. in round numbers, and is still less felt as a check to trade than the export-duty raised at the port in India. Nor did the duty of 2 *d.* per lb., which until lately was imposed on cotton in Great Britain, check the cultivation of cotton in the United States, whereas the abolition of this import-duty in England has done nothing towards emancipating the cotton-grower in India. The abolition of this duty was a pure sacrifice of revenue under the circumstances: had its amount been applied to redeeming some of the repressive dues in the East, a great change, and one of the most beneficial character, might have been effected.

The abolition of the beer duty, while that on malt was retained, was a mistake, for two reasons. In addition to the early stage at which the malt duty is levied as compared with a tax on beer, it is clear that to tax malt while beer is free, is to hold out a premium to brew from any other material rather than malt. By the system of crediting, of which large breweries can avail themselves, the present malt-tax in England is seldom paid before the beer is consumed, and thus constitutes no difficulty on the score of an advance of capital. But the operation of this system explains why the small breweries, which it was thought would very much increase in number, did not become

numerous. The necessity the small brewer is under of paying the duty in advance, is sufficient, even without competition, to put him out of the market.

But if an export-tax be better than a land-tax because it is an approach to taxing consumption, whereas the land-tax is altogether a tax on production, it follows that import dues levied on merchandize imported into a country for consumption can afford a heavier rate of tax without distressing the community than any other. Universal experience shows this to be the case. Every country raises a heavy rate of taxes upon all food drawn from tropical lands, where we have seen that a land-tax is an intolerable burthen. The customs' dues levied in English harbours amount to 20,000,000*l.* annually, being in round numbers equivalent to one-third of the value of our imports of all kinds. The rate levied on the several articles varies extremely, amounting in the case of tobacco to more than 600 per cent., and in sugar to 150 per cent. on the prime cost of those articles. All raw materials for manufactures are admitted nominally free, and the current rate of impost on manufactured goods imported is twenty per cent.; but from what has been said, you can be at no loss to appreciate the practical disadvantage under which the produce of countries burthened with a land-tax lies when brought to an open market.

The advantage which customs' duties have over other modes of taxation, arises from their falling at the close of the series of industrial associations which form the productive power of nations. When the grower of produce has secured the aid of the carrier and the shipping merchant, the latter that of the ship-owner, importing merchant and broker, without any impediment intervening to obstruct their efforts until goods arrive at the stage of consumption, not only is there a probability that each individual will be well remunerated for his share of the labour, but the united capitals and exertion will go further in encouraging production than where restrictions check the flow of industry. This benefit which we derive from taxation at the Custom-house is very much enhanced by the system of bonding, or allowing goods to be stored without demanding the duty upon them until they are taken out to be consumed. In this manner the tax is practically not paid until the goods are sold for consumption, that is to say, until the last and most convenient stage for paying it has been attained. Since the adoption of

the bonded system, the trade of Great Britain has made the gigantic strides which have allowed our customs' revenue alone to exceed the revenues of the largest states of Europe.

But although any tax levied on articles going into consumption is far more easily borne than the same rate of impost at any other stage of production, yet as a financial consideration, the rate of a customs' or import duty is by no means unimportant. Not only do exorbitant duties discourage from consumption, and thus directly diminish the revenue, but by encouraging smuggling they tend to demoralize the community. The extent to which smuggling is still carried on, notwithstanding the reductions made in our tariffs, is the more to be lamented, that we know this propensity to be encouraged by the extravagant rates of duty levied on tobacco, tea, and spirits, all which articles would add largely to the revenue, if the rate of duty were lowered. The circumstances under which the revenue is defrauded by the drying of tobacco, which is again saturated with moisture before it is worked up for consumption, have been well exposed by a public-spirited merchant of the city of London. The writer has pointed to the fact that the stem is extracted in America from the leaf, without which process the leaf could not be so effectively dried as can then be accomplished. The remedy suggested for the loss that hence accrues to the revenue, is to reduce the duty on *unstemmed* tobacco, leaving the present high rate (600 per cent.) on that which is imported with the stalk, and which cannot be dried to the same extent with that which is stemmed. The excessive duties now levied on foreign spirits are, to say the least, a financial absurdity in a country which depends for its supply of grain upon foreign lands. Since the grain which is now consumed in spirit-making is replaced by foreign importations, there can be no good reason assigned for not importing foreign spirits at a duty that would at least increase the revenue. I here of course assume that differential duties, levied for the sake of protecting or favouring any branches of industry at home, are mischievous; and I may be pardoned for dwelling a little upon this point, which has of late years been so much discussed.

What are called protective duties are levied in all countries with the view of rendering the protected articles dearer in the markets of those countries than they naturally would be if trade were unimpeded. Such a policy was a natural deduction from

the views of those political economists who declared that the cost of production fixed the value of an article, and that a tax levied on raw produce raised its price to the amount so levied. I have ventured to suggest another standard of value supported by the authority of some continental economists, according to which the value of an article is mainly measured by the power the consumer enjoys of indulging in it. Upon this basis I constructed the scale of value explained in my opening lecture, and according to which, articles of necessity must be cheap if luxuries are to be sought for; the cheapening of any one article opening, as an inevitable result, a demand for some other, as the rendering any one article in the chain scarce or dear must withdraw value from some other. We have also seen that a tax does not invariably raise the price by its amount.

Now, whatever other result may be obtained by the imposition of duty professedly intended to raise the price of the article on which it is imposed, no increased demand for labour or for capital can ensue from it. When sugar, or salt, or bread, or even spirits, wine, or tobacco, are enhanced in price by a duty levied for that express purpose, the effect is immediately felt either in a diminished consumption of the article rendered dear, and consequently in a diminished demand for the shipping, the mercantile activity, the warehousing, and all other occupations connected with it, or (and the two effects go constantly together) other articles of consumption would be less sought than before, and meat, dairy or garden produce would lose value to the extent of the fund abstracted to pay for the articles whose price was raised. It is therefore not possible in any way to raise the price of an article of consumption, without taking value from some other commodities; and inasmuch as the productions of a country belong to those which rank high in the consumer's scale, the loss suffered by any such disturbance will be the more severely felt. A simple corollary to this rule is, that a manufacturing country loses most when it disturbs, by means of differential duties, the natural course of value in any product of great demand, whether it be an article of food or raw material. But the operation of this rule is not confined to the influence which supplies of raw produce and of manufactured goods reciprocally exert upon each other. Not only would large supplies of foreign grain, sugar, and other articles of food increase the manufacturer's profits, while they extended his market, and augmented

the demand for labour, by stimulating shipping, railroads, mining, and various other occupations, but, as I have shown in my second lecture, rents would be raised by promoting a tendency to refined cultivation, such as stock-feeding, dairy crops, gardening and building. As I have all along pointed out, the interests of landowners and manufacturers and labourers go hand in hand, and only false economical reasoning can suppose any conflict between them.

Manufactured goods act upon each other in the same manner that raw products and manufactures have been shown to do. There is a scale in manufactures in which one article gives value to, or takes value from, all that succeed. The cheapness of cottons and woollens increases the demand for linens and silks. Cheap iron stimulates luxury in building and travelling. The bobbinet frame brought embroidery into general use. Our schools of design followed in the wake of cheap calico-printing and lace-making. When our financiers shall fully and candidly consider the indissoluble connexion which subsists between all the products of industry, I venture to predict that they will find an insuperable difficulty in selecting the peculiar link in the chain at which an increase of duty holds out a promise of *protection*.

An attempt is now making to establish differential duties on sugar raised by slave-labour, and to favour this attempt the suffrages of the people are sought in testimony of slave-labour's being cheaper than the labour of free men. Let not the distinction between muscular and intellectual power which I drew in my first lecture, and have applied throughout, here be lost sight of. If intellectual power be really superior to muscular, and one form of showing this be the invention of machinery, we must not forget that the mind cannot be enslaved without being debased. If the plough really has triumphed over the spade, gunpowder over the lance, the compass over shore navigation, steam and the sail over benches of galley-slaves, the electric telegraph over the post-boy, it is clearly folly to retrace our steps upon the field which opens so invitingly before us. If field-labour in our colonies were aided by machinery as it ought to be, not only could high wages be afforded by the landlords, but there would be no lack of labourers. Let the plough displace the hoe, and the planting of canes be so arranged that no renewal is required for many years; let the steam apparatus and vacuum-pans, so

well devised and executed by Messrs. Pontifex, be everywhere substituted for the old mills and boilers, and we shall find neither reluctance to work on the part of the inhabitants, nor want of returns to the West Indian landowner. Were but the same money laid out in machinery which has been expended in importing coolies, the returns would show a profit instead of a loss, both in life and money.

Could the claim of the West Indian to exemption from the common lot of competition be listened to, that of the East Indian is far stronger. He at least directly contributes to the revenue in the land-tax; and of course, to make their positions alike, the land-tax ought to be extended to the West Indies, when any plan for equality of protection for both is devised. I think, however, that the reasons given for preferring any sort of tax to a land-tax will exempt both the Indies from such an infliction. The islands would materially improve their actual position if they abolished their export tariff, and depended for a local revenue on the import duties alone, which would then very much increase. The absentee landlord, who is now taxed by the export-duty levied on goods exported to pay his rent, might be made to contribute his share to the local revenue by parochial taxation in the shape of an income-tax.

With respect to the Indian empire of Great Britain, there can be no doubt that all parties would be immense gainers by transferring to Government the financial department of the East India House, on almost any terms which the latter thought fit to propose. No indemnification would bear comparison with the immense loss now inflicted upon this country by the Indian revenue system. It is based not only on enhancing the value of all necessities of life, and of all raw materials for manufactures, but it takes the capital which ought to multiply the powers of the labourer when invested in tools and machinery, and converts it, by investing it in the salaries of collectors and other officials, into a means of oppression most repressive of industry. Let these same officials, instead of ministering to the rapacity of a hungry treasury, be converted into engineers, managers of companies, harbour-masters, railroad and navigation officers, or into custom-house officials at the countless ports that might be opened in India, and we should soon feel the value of the mighty resources of those splendid countries. Not only would the indirect revenue raised in this manner soon far exceed the direct

taxation now wrenched from the ryots, but a far larger sum would be paid without imposing any restriction on trade, and would fall lightly upon increased profits. On the other side, a country prospering in the manner thus described would form an invaluable market for our manufacturers, and it would soon become evident that the labour-market in these islands was not overstocked. To supply the demands of 200 millions of rich and intelligent fellow-citizens in the East would so far surpass the present resources of Great Britain, that without large supplies of raw materials it could not be done. Were the land-tax removed in India these supplies would speedily be forthcoming, and the improving state of the revenue would be ministered unto by the improvements in the returns from land. The paramount importance of this subject for British industry will excuse my having dwelt so long upon it; for as long as things remain in their present state, India will, in respect to her industry, not surpass the least-favoured of the continental states, and will consequently be a poor customer in our markets.

I cannot leave the subject of colonial taxation without specially pointing to the injurious effects of the navigation-laws upon colonial interests. The inhabitants of the colonies have a capital in their climate which can be turned to the best account in trading with lands in the temperate zone. For the West Indies the trade with America is of the highest importance; but for the same reason nearly every European state would be glad to make exchanges with those islands. With America the trade can only be favourable to the extent that America can take sugar, coffee, and other tropical products, in exchange for flour, provisions and lumber. But the addition of the Baltic and Mediterranean trades would clearly present a competition of the most desirable kind, and sugar and coffee can there be sold to almost any extent, at least to the extent that produce will be taken in exchange for them. There are now two checks upon the direct trade which many continental nations are very desirous of opening with all tropical lands. The first lies in the general cheapness of all manufactured goods in England and of all raw produce in America: hence it is natural that the West Indians should prefer those markets for purchasing their stores and supplies of tools and clothing. On the other hand, Java, the Philippine islands and the Brazils supply sugar and coffee on cheaper terms than the British West Indies. Hence again the

Prussians, Belgians, Italians and Austrians prefer to buy the sugar of South America and the Indian Archipelago. The navigation-laws increase the difficulty arising out of these circumstances, by raising freights and making many trips unprofitable which otherwise would have brought buyers and sellers together. Neither provisions nor sugar will bear an addition to the charge of unloading and reshipping in London, Liverpool or Glasgow, and as these charges grow proportionately more oppressive the lower an article falls in price, they already form a differential duty against the produce of our colonies in European markets. Whatever has a tendency to increase these charges is destructive of trade, without presenting a solitary compensating feature.

It has already been shown that duties on raw produce do not necessarily drive up the price by the full amount of the duty. There is a tendency on all sides to devise modes of escaping from the pressure. But to whatever extent high import duties affect prices, they of course raise the price of all home produce which competes in the market with that which is imported. If beet-root sugar be manufactured in a country importing colonial sugar with a duty, the former will sell at the same price with the latter, although it pays no duty. Hence too, when importations of foreign corn take place, the price of home-grown corn is the same with that of the imported corn when duty paid. This price is, however, not necessarily fixed by the price of the foreign corn in the foreign market. It is quite as often fixed by the price of home-grown corn in the importing market; and, inasmuch as without the importations that price would be higher than after they took place (notwithstanding the duty is imposed on the imported corn), the general price, where the quantity required is not large, will be fixed by the value of the greater bulk. In some cases of this kind the foreign corn-holder, who has not calculated the effect of his importation on the general market, finds he must submit to a smaller profit than he expected, and occasionally to a loss. The grower of raw produce, however, can often diminish his rate of profit to an extraordinary extent. There are countries even in Europe (to say nothing of America) which are cultivated to a very small extent. In Hungary, Poland, and the Danube provinces of Turkey, the smallest conceivable remuneration which could be reckoned upon as certain, would suffice to bring hundreds of square miles of fine waste land under the plough; and where the land-tax does not

prevent capital from accumulating in the shape of roads, means of conveyance, and implements, each check imposed stimulates to renewed exertion.

By leaving its markets open to competition amongst neighbouring countries, this tendency to draw fresh resources within the sphere of production may be turned to good account by an importing country. It can obtain the first necessities of life at the lowest possible rates from countries which produce them on a manufacturing scale, and it can pay for them in more refined commodities which an accumulated population alone can produce. If a low rate of duty be imposed upon the goods imported, there is a tendency, through the rivalry between the competitors for supplying large markets, to throw the tax practically on the exporting country. This tendency of course stops with the practicability of producing constantly cheaper, by bringing greater tracts of land than before under cultivation; but this is a wide margin at present.

The same cannot be effected by an export-duty levied on produce at its shipping port, as has been stated by some writers. The effect of a tax not being measured by its amount, but by its comparative pressure at different parts of the industrial association, it follows that the simpler and less oppressive elements offered by an import-tax (which is, as we have seen, commonly a tax upon consumption,) are more easily borne than the export-duty, and consequently can be more easily absorbed by competition. It is only upon this principle that one country can throw any portion of its taxation upon another; but the rate of tax thus thrown off must be very moderate.

From what has been said it must be sufficiently apparent that no tax presses directly in the ratio of its amount upon the payer, but that it has a tendency to do more or less mischief in proportion as it restricts production or merely presses upon consumption. The general notions current respecting equality of taxation may be tested by this rule. Nothing seems fairer than a turnpike toll, and yet there is in reality no greater inequality than the pressure it occasions. The poor man who carries on a horse, or in a cart, the produce of his labour to market, is rated at the same charge with a man who rides or drives for pleasure. To the one the toll is an outlay in advance, for the other it is part of the money he had destined to spend unproductively. In Wales, tolls stopping the transit of the produce of the hills

to their accustomed market threatened to put whole districts out of cultivation, and occasioned the "Rebecca" riots. Again, the value of each field along a line of road differs according to its distance from the market, and the most distant farm has the least value. The crop from the most distant land is subjected to the highest charge for carriage, and yet it pays an equal toll with that of a field lying near the gate and subject to much less charge for carriage. The same principle applies to tithes and other rates levied on actual produce, or on its estimated value in money at a market-town. The grain tithed in a parish has everywhere a differing value for the grower, although the buyer puts the same value upon all he meets at market. Hence, as has been pointed out in speaking of the land-tax, an equal rate levied over a whole district will scarcely be felt upon some land, while it must necessarily put other lands out of cultivation.

The excise duties, inasmuch as they press upon production and raise the price of the necessities of life, are a most prejudicial way of raising a revenue, and ought to be got rid of as speedily as possible. The great staff paid out of these duties is occupied in a demoralizing way, and there is not one of the excise duties that does not indirectly act as repressive to industry in a more injurious manner than is evident from its direct operation. I have already pointed to one injurious effect of the malt duties in encouraging the sale of beer brewed from smuggled materials. Perhaps a more serious inconvenience arises from the prevention by these duties of the use of malt in fattening cattle. The salt-duty levied in many countries at an exorbitant rate is highly prejudicial both to the health and to the industry of the countries suffering under its infliction. British India also languishes under the misery a salt-tax occasions, in common with most of the continental states.

The equal rates imposed upon letters by the charge for postage is unjust theoretically, although it can be reduced to a minimum by a very low rate, such as has been adopted in England. But even in this country letters of business with inclosures are rated higher than ordinary communications. There can be no ground for drawing a profit from the Post-office, except the ordinary commercial calculation that Government transports more safely and cheaper than private enterprise could. The fair test of the efficiency and cheapness of a post-office establishment is everywhere the renunciation of the monopoly formerly

acknowledged to be indispensable for post-offices. Money-orders, which are a great convenience, and which consequently already form a considerable addition to the paper currency of the country, can claim no exceptional position; and the pressure to use them arising out of the insecurity of money-letters is scandalous. The motives for granting them in small amounts clearly apply to the issues of bank-notes with equal effect.

Contracts entered into with private parties for the conveyance of mails and despatches are liable to prove demoralizing where not based upon the strict principle of competition. Whole lines of inefficient packets are at this moment perpetuated, because the revenue drawn from the Post-office makes it a matter of indifference whether passengers sail with that line or prefer another. Brussels and the Briel in Holland can both easily be reached in twelve or thirteen hours from London, but letters are much longer on the way with the present arrangements. The great success which has attended the adoption of the manufacturing system by the Post-office ought to encourage to imitations, which would not fail to be equally profitable if planned with equal skill; but of course the great convenience afforded the people by the present low rate of postage in England must be taken as a large share of the success in this attempt.

County and parochial taxation it is customary to levy by rates charged upon property. If we bear in mind the rule by which the latest stage before consumption is that in which a duty may be levied with the greatest ease, it is clear that a rate falls unequally upon land in the farmer's hands and upon lands or houses used merely as dwelling-houses or for luxury. But a mode of avoiding such an inequality is not easily devised, by which absentee landlords would not escape the rate. It would be a pecuniary relief to the tenant if the landlord undertook to advance the capital which is locked up in the payment of rates; he would, however, then deprive the tenant of his voice in parish matters, which would leave much to regret. The outlay for roads and public buildings must be regarded as fixed capital expended for the benefit of the landlord. Annual rates and assessments, however, levied on the tenant absorb so much circulating capital. Where rates are low there is a tendency to accumulate capital greater than the mere saving in actual expenditure, by the convenience which the command of so much circulating capital affords to the industrious: consequently, in

low-rated parishes rent can well be higher, and yet more prosperity accrue to the tenant, than where rates are oppressive. All endeavours to lower local rates are therefore desirable, and one of the most efficacious is the principle of associating districts and parishes together, to bear burdens in common. By associating, the manufacturing principle is carried out in taxation; and both economy and efficiency may be better secured from a small number of officers well-paid, but responsible to a large number of constituents, than can be expected from the officers of small parishes. Upon this plan the Union workhouses superseded those of parishes, which were in every respect inferior, and much as the new arrangement has been attacked, it has undoubtedly been productive of the greatest benefits. That its success was not striking and complete in the first instance was owing to an extraneous cause. It was manifestly an anomaly to ordain that every man should earn his own bread, while the law at the same time fixed the price of that bread. If the food-market be a close one, the labour-market must also be a privileged sanctuary, and wages must be eked out at somebody's cost when the usual channels of trade are dried up which create a demand for labour. With the return to a natural state of trade wages will rise, as we have seen, and the poor's-rate will cease to occupy the prominent place which it hitherto has filled in men's minds.

A serious motive for increasing the area of associations for taxation lies in the necessity for leaving as little power as possible in the hands of small cliques, who might create inconvenience by refusing to submit to public opinion. Thus in the case of drainage, it cannot be allowed that a parish or a district possessing the outfall should dictate to the whole back-country depending on that outfall. In the point of sanitary arrangements generally, one parish cannot be allowed to continue to disregard the measures necessary to ensure a good state of public health, since it cannot keep its infectious disorders within its own bounds, and it can prefer no claim to the privilege of propagating disease. As the wards of the cities, which were as scrupulously guarded in the middle ages one against the other as against external aggression, fell before general measures of police less burdensome but more efficacious than those; so the incomplete and inefficient sanitary precautions which were adapted to the small means and requirements of a scanty popu-

lation must be expanded to a scale suitable to the extent, the population, and the wealth of great cities. The saving of expense and the positive enjoyment which can be obtained by a judicious association for improving the state of large towns, have been too strikingly proved in evidence laid before Parliament for it to be necessary here to repeat it. Of course in all such associations the minor districts should not be excluded from their fair share of influence; but this should be altogether subordinate to the larger view of the general good.

The examples practically exhibited by the water-companies of Cork and Nottingham, by the gas experiment at Manchester, since successfully imitated at Liverpool, give a faint indication of what may be accomplished by association for cleansing streets and sewers, for providing reasonable and efficient medical relief, for rendering cemeteries innoxious, and many other improvements that are imperatively demanded. It is to be hoped that the sanction of Parliament may speedily authorise the trying of some experiments of this kind on a suitable scale.

But if health be an object of primary importance to a community, knowledge and intellectual power are a far higher consideration, since the ignorant and dissolute are even more to be dreaded than persons infected with disease. For the education of the young, association ought to take place, and indeed history shows that it ever does take place even before material wants are consulted. In the early stages of society little knowledge of facts is imparted with great labour. As communities make progress knowledge becomes gradually easier to acquire, and consequently its extent and variety ought to form no impediment to the sound exercise of the reasoning faculties. Education ought to be as much as possible imparted in common, a great difficulty in securing which will be done away when association for sanitary purposes has removed the fears of parents regarding the health of their children. Publicity of schools is also beneficial to the manners and morals of both scholars and preceptors. In every country, moreover, there ought to be a national standard of education accessible to all citizens, by which means private instruction would not fail to be kept up to a proper level.

We are, however, students during our whole lives; and as no difficulty ought at any time to be thrown in the way of mental cultivation, no term is too strong for denouncing all taxes which

tend to hamper the diffusion of knowledge. Such taxes, singular enough, are peculiar to the British empire. No other country taxes paper, or advertisements, whereas newspaper stamps, when in use, as in France, are a merely nominal burthen. It cannot surely be said that the 600,000*l.* levied on paper, when the drawback on paper exported, and the duty on the consumption of that which is used in the public service is deducted, deserves to be inflicted on a nation like England for the sake of the revenue. The iniquitous tax on newspapers will probably be one of the first denounced, when taxation is treated scientifically instead of empirically, as perhaps may be the case in another generation.

A tax that imposes an advance of capital on the producer must, as we have seen, be regarded as highly injurious to industry. Where this is the result of assessed taxes, they operate as a check to trade, and consequently tend to diminish wages. It is doubtless difficult to distinguish occasionally between houses that are mere abodes of luxury, and such as are partially or even wholly employed as workshops. A little care and good feeling on these points might find a means of softening the harsh operation of the window-tax, which ought to depend upon the use to which a room is put, and not on the size or the architecture of the house, as is now the case. Should any such arrangement be adopted, it would be a great concession to the distinction I have endeavoured to hold up between the matter given to us to work upon and to work with, and the mind which fashions that matter for the consumer's use.

Licenses have a similar tendency, being an advance of a certain sum for the privilege of carrying on some particular occupation for a fixed period. In the greater part of Europe all trades are licensed. In many only certain trades, which include however in Austria, and in such Prussian cities as have not substituted an income-tax, the trades of the butcher and the baker. In order to indemnify the trades that are exceptionally taxed, they are allowed a kind of monopoly which is of the most obnoxious and injurious character. No trade ought to be subject to the payment for a license which it is not intended positively to discourage; and some good use might doubtless be made of the power in the hands of a wise government. Houses retailing spirits, or even beer not brewed on the premises, might be taxed in a manner that would enable our Government to do away with

the malt-duty, and thus to relieve a large portion of the public of an arbitrary and oppressive impost without inconveniencing anybody. It is highly probable that a great deal of the capital now locked up in the malt-duty would, on such a change being adopted, be transferred to the purchase of public-houses, where, owing to the comparatively less oppressive nature of the license, a larger return would be obtained than is now got from it. Fifty thousand public-houses taxed with 100% annual license, and selling beer on which no malt-duty was paid, would both furnish the 5,000,000% now raised as malt-duty, and be amply repaid for their contribution to the national revenue. No doubt some small public-houses would be inconvenienced by such a license-duty; but the sale of tea and coffee might be left free, as well as of beer brewed on the premises. By adopting this suggestion, the object sought to be obtained by the change made some time back in the licensing act would be attained, which has not hitherto been the case. The shops of tobacconists might fairly also be subjected to a license which would occasion the less inconvenience, that if the enormous sums now expended on tobacco were transferred to any other article of luxury, the revenue would have a good chance of gaining. The relief suggested a few pages back in a reasonable reduction of the duty, might be combined with a licensing-system for retailers.

The plan which has been proposed for merging all taxes into an income-tax labours under the difficulty of ascertaining and classifying incomes. Through indirect taxation each man taxes himself to the amount he spends, while, by leaving corn, meat and other necessities free, (they should also be free in trade,) a certain portion of every man's income is left untaxed. Such an exemption ought to accompany an income-tax, but it is better accomplished by the voluntary principle which indirect taxation involves.

APPENDIX.

LECTURE II.

Rents in England. (Parliamentary Evidence.)

Tenant's Name.	Situation.	No. of Acres.	Rent per Acre.	Description of Land.	Annual produce in Bush. wheat.
C. Parker ...	Essex ...	20,000	£ s. d. 1 10 0	Marsh	24 to 30
Ditto	Ditto ..	—	1 8 0	Marsh and Arable.	
J. Rolfe	Bucks. ..	300	1 0 0	Light-Arable.	
J. Kemp ...	Essex .....	.....	1 10 0	
R. Babbs ...	Ditto ..	288	0 14 0	Arable and Grass.	20
J. Ellman ...	Sussex...	1,300	four bushels.	Wheat.....	
Allotment } Pieces... }	Suffolk ..	.....	1 6 0	Spade culture.....
	Ditto ..	.....	2 0 0	
	Lincoln	2 8 0		44

Rents in Scotland. (Mr. Hyde Greg.)

Tenant's Name.	Situation.	No. of Acres.	Rent.	Description of Land.
	Two miles from Edinburgh ...	.....	£ s. d. 15 0 0	{ Grass where the common sewers discharge. Supply of manure from market.
	Ditto .....	.....	7 0 0	
	Ditto	340	5 0 0	
	Three miles from Edinburgh ...	.....	4 0 0	
	Seven miles from Edinburgh ...	500	3 10 0	
Hope	East Lothian	650	1 11 6	Arable and Grass.
Bell	Berwick	552	1 4 6	Arable and Grass.

Rent of land in Lombardy and Venice. (From Burger's description.)

Province.	No. of Estates.	Rent of 1 Joch = 1 $\frac{3}{4}$ Acre.		Land-tax and County-rate, per Acre.
		Highest.	Lowest.	
Lodi	11 Estates	£ s. d. 4 18 1	l. s. d. 2 2 0	l. s. d. 0 13 8
Pavia	3 Estates	2 12 0	2 5 0	0 7 6
Milan.....	15 Estates (watered).....	4 7 0	1 13 0	0 9 10
	2 Estates (dry).....	2 12 0	2 12 0	0 6 6
Como.....	Varese	2 15 0	.....	0 8 0
	Dandolo I.	3 8 0	.....	0 10 6
	Dandolo II.	3 2 0	.....	0 9 3
	E. Thescano	2 15 0	.....	0 5 9
	Mozzate Ct.	1 10 0	.....	0 5 0
	Castiglioni			
Padua	6 Estates	6 6 0	1 3 0	0 6 0
Treviso	7 Estates	10 0 0	5 0 0	
Friaul.....	9 Estates	4 18 0	1 12 0	
Vicenza	16 Estates	Average	3 8 0	

The metzen of wheat is calculated at 3 florins 33 kreutzer, or 4 florins 4 kreutzer in Friaul; the former = 33s. 6d. per quarter, the latter = 38s. 8d. per quarter, in the cases of corn-rents. Wine is valued at 3 fl. 5 kr. per eimer, = 6d. per gallon.

LECTURE III.

PRODUCTIVE VALUE TO THE NATION OF THE COTTON MANUFACTURE.

Estimate of the difference in pounds sterling of the sums accruing to the trade in Cotton Manufactures during the years 1845, 1846, and 1847, to pay for the expenses of Fuel, Machinery, Drugs for Dying, Printing, Bleaching, Interest of Capital, and every kind of Wages, Profit, etc., after deducting the actual cost of the raw material.—*Trade Circular of Du Fay and Co. of Manchester*, January 1848.

	1845.	1846.	1847.
	lbs.	lbs.	lbs.
Cotton consumed in Great Britain.....	592,581,600	598,260,000	439,277,720
Waste in spinning this, 1½ oz. per lb.	64,813,612	65,434,687	48,046,000
Production of yarn in lbs.....	527,767,988	532,825,313	391,231,720
Disposed of as follows :—			
Exported in yarns and thread.....	136,618,643	159,301,482	119,422,254
Exported in manufactured goods, reduced } into weight of yarn.....	221,032,974	217,693,617	191,969,597
Consumed at home and not otherwise } enumerated	170,116,371	155,830,214	79,839,869
Accounted for, as above.....	527,767,988	532,825,313	391,231,720
Average cost of cotton in each year.....	at 4½d. per lb. 10,802,269	at 5d. per lb. 12,463,750	at 6½d. per lb. 11,668,314
Declared value of cotton yarns exported.....	6,963,235	7,873,727	5,867,000
Ditto ditto ditto	19,156,096	17,726,966	17,100,000
Estimated in the same proportion as the de- } clared value of the exported goods, plus ½* }	19,610,657	16,881,605	9,500,000
Total value of production.....	45,729,988	42,482,298	32,467,000
Deduct the cost of cotton as above.....	10,802,269	12,463,750	11,668,314
Sums remaining to be distributed, as stated } above	34,927,719	30,018,548	20,798,686

The balance remaining to be distributed as explained in the above estimate was, for

1845, £34,927,719, or 76½ per cent. on the value.
 1846, £30,018,548, or 70½ " " "
 1847, £20,798,686, or 64 " " "

* The addition of ½ has been made as an equivalent for the superior descriptions of finished goods used in this country. The difference which the home consumption of 1845 and 1847 shows between a good and a bad year is very striking, amounting for England, in the single article of cotton, to £10,133,955. By similar savings in other articles of consumption, the high price of bread and the deficiency of wages had to be made up. Wages cannot otherwise than decrease under such circumstances; but what becomes of profits? Had the price of the raw material been kept down by a supply from the East Indies, there would have been a sum of three millions of pounds sterling to spend in manufacturing processes in 1847. Taking it roundly, it may be said that the home consumption of our cotton manufactures averages about one-fifth in weight, or one-third in value.

**Number of Persons employed in Cotton, Woollen, Worsted, Flax, and Silk
Factories in 1839 and 1847.**

	1839.	1847.	Per centage increase.
England.....	349,294	455,042	30½
Ireland	14,863	22,591	52
Scotland	59,314	67,243	13½
Total.....	423,471	544,876	28½

Comparative estimate of the quantity of Raw Cotton consumed in the chief Manufacturing Countries from 1836 to 1847, in millions of lbs.—*Du Fay's Circular*, Jan. 1848.

Countries.	1836.	1837.	1838.	1839.	1840.	1841.	1842.	1843.	1844.	1845.	1846.	1847.	Total six years, 1836-1841.	Total six years, 1842-1847.
Great Britain (millions of lbs.)	350	369	435	362	473	422	462	531	543	597	604	425	2411	3163
France, including adja- cent countries	118	121	133	110	157	154	163	152	146	158	159	112	793	890
Holland, Belgium, Ger- many, and North of Europe	57	58	61	48	72	65	76	82	86	96	97	97	361	536
Countries bordering on the Adriatic	28	32	26	26	28	29	38	44	26	38	39	31	169	216
United States of North America	86	82	92	103	111	115	105	131	143	158	175	175	589	887
Total...	639	662	747	649	841	785	846	940	944	1047	1074	840	4323*	5691†

* Therefore Great Britain 55·7 per cent. of the whole.

† Therefore Great Britain 55·8 per cent. of the whole.

How erroneous the views of the French Communists on the subject of competition are is clear from the above Table. It is evident that the progress which has been made in the manufacture of cotton has been as large in Great Britain as the average progress made in other countries, although in those foreign countries in which cotton manufactures have been established a stimulus has been given and the rate of profit has been greatly increased by protective duties upon imports.

Sums authorized to be invested in Railways in Great Britain.

	Length in Miles.	Authorized to be raised in Shares and Loans.	Sums actually raised in		Total.	Length of Line opened.
			Shares.	Loans.		
Prior to 31st Dec. 1843.	2,276	£ 82,848,041	£ 43,468,641	£ 22,062,641	£ 65,530,792	Miles. 1952
During 1844.	805	20,454,698	4,341,519	2,479,256	6,820,775	196
Ditto 1845.	2,700	59,479,485	15,622,831	506,978	16,129,809	293
Ditto 1846.	4,538	128,918,207	30,856,627	6,958,366	37,814,993	595
Ditto 1847.	1,354	44,879,739	32,173,973	8,851,514	41,025,487	780
	11,673	336,580,210	126,463,591	40,858,265	167,321,856	3816

On 1st May 1847, there were 47,218 persons employed as servants of companies on 3305 miles of railway in activity, and 256,509 were employed in constructing railways.—*Commissioners of Railways' Report*.

LECTURE V.

Quantity of Gold produced in the Dominions of the Emperor of Russia in each of the Ten Years ended with 1846, its Value in Pounds Sterling.

RETURN OF PRODUCE AND VALUE STERLING.										
Year.	IN THE OURAL.			IN SIBERIA.			TOTAL.		QUANTITY AND VALUE OF FINE GOLD.	
	Public Mines.	Private Mines.	Total.	Annual Progress compared with 1837.	Public Mines.	Private Mines.	Total.	Annual Progress compared with 1837.	Russian Weight.	British Troy Weight.
1837.	131-00	178-53	309-53	1-00	26-05	106-92	132-97	1-00	402-68	17,669-60
1838.	131-37	168-30	300-17	0-97	27-95	165-21	193-16	1-45	448-93	19,699-06
1839.	140-05	169-73	309-78	1-00	23-74	159-46	183-20	1-38	448-61	19,685-06
1840.	134-12	164-29	298-41	0-96	32-84	216-57	249-41	1-87	498-52	21,875-06
1841.	131-48	165-00	296-48	0-95	29-07	321-32	350-39	2-63	588-66	25,830-40
1842.	130-30	162-10	292-40	0-94	37-82	578-11	615-93	4-63	826-58	36,270-33
1843.	137-70	176-08	313-78	1-01	no return	981-00	981-00	7-37	1178-25	51,701-61
1844.	136-48	173-58	310-06	1-00	Public & Private.	1031-52	1031-52	7-75	1220-84	53,570-46
1845.	130-40	137-60	328-00	1-06	ditto.	1043-80	1043-80	7-85	1248-34	54,777-16
1846.	129-58	185-07	314-65	1-02	58-03	1,304-85	1362-88	10-25	1526-55	66,985-01
Total								3-80	8,387-96	368,063-69
										£18,761,310

PROGRESS.—During the ten years ended with 1846. The return of produce shows—1st. That there has been a slow increase in the supply from the Oural. 2nd. That the produce of *Siberia* has increased more than *tenfold*. 3rd. That there has been an augmentation of nearly *four* to *one* in the total annual supply within ten years.

PROSPECT.—It is said that new mines have been discovered in the *Oural*; and the fact of an Imperial Ukase having lately forbidden the sale of public estates in the region of the Auriferous Sands of *Siberia*, justifies the inference that the Government have made successful surveys in that direction, and anticipate a further profitable development of the gold washings which have been so fruitful during the last four years. Under these circumstances it would seem reasonable to expect an increase of supply, of which however it is quite impossible to estimate either the proportion or the continuance.

Note.—Were the production to continue at 3,500,000*l.* per annum, the accumulation in 1900 would exceed 200,000,000*l.* sterling. But if the increase continued progressive at the present rates, the accumulation would be a fabulous quantity.

From 12 to 24 per cent. on the produce of the private mines; the rate being subject to no rule, but varying according to localities and other circumstances.

LECTURE VI.

ANALYSIS OF THE TAXATION OF GREAT BRITAIN.

Taxes falling on Property.

	£	£
Land and Assessed Taxes	4,559,043	
Stamps on Deeds and other Instruments, England	1,703,042	
Ditto.....ditto	Scotland	120,714
Probates of Wills.....England	902,380	
Ditto.....ditto	Scotland	68,792
Legacies	England	1,167,426
Ditto.....Scotland	83,852	
Fire Insurances	England	956,229
Ditto.....Scotland	69,411	
Income Tax on Property	3,270,667—	12,801,556

Taxes falling chiefly on Production in Trade.

Stamp Bills of Exchange	426,559	
Ditto, Scotland	95,117—	521,676
Bankers' Notes and Composition	41,329	
Ditto, Scotland	17,584—	58,913
Receipts	148,215	
Ditto, Scotland	17,584—	165,799
Marine Insurances	159,119	
Ditto, Scotland	19,303—	178,422
Stage Coaches	178,850	
Ditto, Scotland	11,183—	190,033
Hackney Coaches	46,095—	46,095
Railways, England.....	79,058	
Scotland	6,941—	85,999
Licenses and Certificates	England	177,129
Ditto.....Scotland	22,610—	199,739
Newspapers	England	284,338
Ditto.....Scotland	31,397—	315,735
Advertisements.....England	133,567	
Ditto.....Scotland	18,105—	151,672
Excise Duties		13,276,879
Post Office		932,000
		<hr/> £16,122,962

Taxes falling chiefly on Consumption.

Income Tax on Profits and Salaries	England	2,136,856
Ditto.....Scotland	190,581—	2,327,437
Gold and Silver Plate, Cards and Dice ...England	76,781	
Ditto.....ditto.....Scotland	2,854—	79,635
Penalties at Law	England	103
Ditto.....Scotland	1,210—	1,313
Customs Duties		19,940,296
		<hr/> £22,348,681

Revenue of the Year ending April 5, 1848...£52,052,757.

The view taken in Lecture VI. of the probable cheap production of sugar, through the aid of improved machinery, is fully confirmed by evidence just published in the report of the Committee on sugar and coffee.

One hundred and thirty-eight estates in Jamaica, which are stated to have produced 25,928 hogsheads of sugar in 1832, are returned as producing 57,006 hogsheads in the two years, 1846 and 1847, the former being a bad year. ~~The present yearly average is therefore 28,503 hogsheads. Of rum, the average in 1846 and 1847 was 15,355½ puncheons, whereas in the last year of slavery it was but 10,000 puncheons.~~

If the detailed returns in the report referred to be examined carefully, they will show a progressive decrease in the cost of production from the years when machinery was introduced for the manufacture of sugar. This is strikingly apparent in the figures indicating the cost of production for 1847, when the crop was so large that with the present supply of labour it could not have been got in without improved machinery. A natural result was, that where the vacuum pans and steam mills had been established, the price was wonderfully low, being returned on four different estates at 9s. 7d., 8s. 9d., 6s. 6½d., and 4s. 4d. per cwt. respectively. Where such judicious investment of capital was not made, the cost of harvesting and manufacturing was naturally greater than in preceding years, as is shown by some of the evidence.

The report sums up with stating the cost of production on the 138 estates to be £1 2s. 7½d. per cwt. ~~as the average of 1846 and 1847.~~ The average return of seventy-one estates, which specify the cost of 1847, is only 18s. 10½d., while the forty-eight best-managed estates average together 15s. per cwt. It is not demanding too much, if we calculate on the progressive adoption and improvement of machinery (including *ploughs*), and predict that sugar will ultimately be grown in the West as cheaply as in the East, and that the cost will not much exceed 10s. per cwt. But it is evident that competition and not protection must urge to such improvement, which would very much enrich the planter by securing him an extended and steady market. Nor need the prospect alarm mortgagees, provided the means of transport now available be increased.

EAST INDIES.

Produce Taxes.

Specimen of a Produce Tax changed into an Areal Assessment, from the Report of the Collector of Broach to the Bombay Committee.

Year.	Price of cotton per lb.	Value of crop on a Beega, or 2477 square yards.	Land tax assessed on the Beega.	Remains for cost of cultivation and clearing.
	<i>d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
1840	3	9 9½	4 5½	5 4
1841	1½	5 8½	4 5½	1 4
1842	2	6 6½	4 5½	2 0½
1843	2½	7 4	4 5½	2 10½
1844	2	6 6½	4 5½	2 0½
1845	2	6 6½	4 5½	2 0½
1846	2	6 6½	4 5½	2 0½

Of course Cotton cultivation on these terms is abandoned on all lands on which the cost of cultivation exceeds 2s. 0½d. per beega, or about 4s. 4d. per acre. The Report to the Bombay Committee is highly valuable, as showing the oppressive nature of the land assessment in India, and its effect upon different crops.

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